

VAX/VMS

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VAX/VMS SYSTEMS DISPATCH

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The **VAX/VMS Systems Dispatch** contains new and revised Software Product Descriptions, programming notes, software problems statements and responses. Much of the material is developed from Software Performance Report (SPR) answers significant to the general audience and is printed here to supplement the maintenance updates.

DECnet-VAX
DECtype/VMS
ReGIS Graphics Library
RTEM-11
VAX-11 ADE
VAX-11 BASIC
VAX-11 BLISS
VAX-11 C
VAX-11 CDD
VAX-11 COBOL
VAX-11 COBOL/74

VAX-11 CORAL-66
VAX-11 DATATRIEVE
VAX-11 DBMS
VAX-11 DECalc
VAX-11 DECOR
VAX-11 DIBOL
VAX-11 DSM
VAX-11 FMS
VAX-11 FMS
VAX-11 FORTRAN
VAX-11 MUX200
VAX-11 PASCAL
VAX-11 PL/I

VAX-11 SPM
VAX-11 TDMS
VAX-11 2780/3780 Protocol
Emulator
VAX-11 3271 Protocol
Emulator
FORTRAN IV/VAX to RSX
(Cross Compiler)
VAX-11 SORT/MERGE
VAX
PDP-11 DATATRIEVE/
VAX

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TABLE OF CONTENTS

		<u>Page</u>
HELPFUL HINTS FOR WRITING SPRS		1
KNOWN PROBLEMS AND RESPONSES		
<u>Component/ Product</u>	<u>Seq. No.</u>	
<u>VAX/VMS (V3.n)</u>		
SYS		
CPU TIME LIMIT IS NOT DEDUCTIBLE	1.2.42	17
HIGH AST LATENCY	1.2.43	19
LOGINOUT		
ACCESS VIOLATION DURING SUBSEQUENT BATCH JOBSTEPS	4.4.4	21
F11AACP		
INDEX FILE ALLOCATION FAILURE	7.1.11	23
RMS		
SEARCH LOSES PLACE ON RMS\$ PRN ERRORS	7.5.41	25
INVALID %RMS-W-RTB ERROR ON STREAM FILE	7.5.42	26
XWDRIVER		
POINT-TO-POINT BSC MODIFIER TO \$QIO	8.18.2	27
LIBRARIAN		
LONG MODULE NAMES CONFUSE LIBRARIAN/LIST	11.4.10	29
LBR\$GET_HELP RETURNS WRONG FLAG TO OUTPUT ROUTINE	11.4.11	30
SET TERMINAL		
START-UP PROCESS HANGS DOING SET TERMINAL	11.15.8	31
VMSINSTAL		
VMSINSTAL IGNORES DEVICE ALLOCATED ERROR	11.36.8	33
CDU		
CDU DOES NOT ALLOW DEFAULTS ON LISTS	11.42.1	35
DECnet		
REMOTE PROCESS NOT DELETED	20.2.6	37
PROBLEMS WITH DLM OVER PERMANENT VIRTUAL CIRCUITS	20.2.7	38
REMOTE LOGIN FACILITY PROBLEM	20.2.8	39
RMS		
RSTS FILESPEC INCOMPATIBILITY	20.11.4	41
RTPAD		
RTPAD AND CTRL/O	20.14.2	43
RTPAD SINGLE STREAMS TERMINAL \$QIOS	20.14.3	44

TABLE OF CONTENTS (cont.)

<u>Component/ Product</u>	<u>Seq. No.</u>	<u>Page</u>
<u>VAX/VMS (V4.n)</u>		
SYS		
F\$GETDVI INFORMATION INVALID IF DISK NOT MOUNTED	5.20.1	47
EXCESSIVE MODIFIED PAGE LIST WRITING	5.20.2	48
GETJPI PROC INDEX VALUE	5.20.3	49
SHUTDOWN WITH REBOOT CHECK CAN FAIL	5.20.4	51
TODR DEFINITION REMOVED IN VAX/VMS VERSION 4.0	5.20.5	52
SCREEN MANAGEMENT SYMBOLS DEFINED INCORRECTLY	5.20.6	54
TEMPORARY MAILBOX LOGICAL NAMES	5.20.7	55
ACCOUNTING		
PROBLEMS WITH ACCOUNTING SELECTION BY UIC	10.5.1	57
USER RECORD DISPLAYS SCROLL OFF SCREEN	10.5.2	58
SYSGEN		
DISCREPANCY IN SCSNODE NAME LENGTH	11.35.1	59
SYSINIT		
QUOTA CACHING DISABLED ON THE SYSTEM DISK	11.40.1	61
UPGRADE		
CVTUAF DOES NOT COPY USER DATA AREA	12.10.1	63
VMSINSTAL FAILS DURING VERSION 4.0 UPGRADE ON TU81	12.10.2	64
VMSINSTAL		
VMIBCKERR.TMP INADVERTENTLY PLACED IN SAVE SET	12.15.1	65
JOBCTL		
SNDSMB WITH FILESIZ OPTION FAILS	15.15.1	67
PRINT		
SYMBIONT ISSUES BLANK PAGES WITH /SETUP	15.25.1	69
SUGGESTION FOR DEFAULT FORM FOR EACH QUEUE	15.25.2	70
PRINT SYMBIONT		
HOW TO PRINT HEADERS IN 80-COLUMN FORMAT	15.30.1	71
UNEXPECTED SYMBIONT PROCESS TERMINATION	15.30.2	73
DECnet		
NETWORK JOBS USE DEFAULT DCLTABLES	25.5.1	75
SPURIOUS NODE UNREACHABLE ERRORS	25.5.2	76
STARTNET.COM INCORRECTLY PARSES NODE ADDRESS	25.5.3	77
STARTNET.COM FAILS TO CHECK FOR ALTPRI PRIVILEGE	25.5.4	78
XDDRIVER		
DEVICE FULL ERROR WHEN INITIALIZING DMP-11	32.25.1	79
YQDRIVER		
YQDRIVER CORRUPTS NONPAGED POOL	32.45.1	81
TTDRIVER		
VT200 NOT DEFINED IN \$DCDEF	33.20.1	83
DMA NOT SET ON DMF-32 LINES	33.20.2	84
LPDRIVER		
SYSTEM-F-EXQUOTA ERROR ON PRINTOUT	34.20.1	85

TABLE OF CONTENTS (cont.)

<u>Component/ Product</u>	<u>Seq. No.</u>	<u>Page</u>
RMS		
READ FROM SYS\$OUTPUT FAILS	40.40.1	87
COPY/OVERLAY FAILS IF DESTINATION WRITE-PROTECTED	40.40.2	88
CONFUSION ON \$CREATE USING SEARCHLISTS	40.40.3	89
\$RENAME RETURNS INCORRECT ERROR MESSAGE	40.40.4	90
ACCESS CONTROL STRING PARSED INCORRECTLY	40.40.5	91
RTL		
VAX BASIC PROGRAMS RETURN AN INCORRECT ERL FOR ERRORS 50 AND 52	45.1.1	93
ANALYZE		
ANALYZE/IMAGE REPORTS INCORRECT LINK DATE AND TIME	55.5.1	95
AUTHORIZE		
AUTHORIZE HAS TROUBLE PARSING /<ACCESS> QUALIFIERS	55.10.1	97
REVOKE/IDENTIFIER DOES NOT REMOVE UICs	55.10.2	98
BACKUP		
PROBLEM BOOTING STANDALONE BACKUP	55.20.1	99
CONVERT		
CONVERT/RECLAIM MAY ACCESS VIOLATE	55.30.1	101
CONVERT CAN INCORRECTLY REPORT DUP AND SEQ ERRORS	55.30.2	102
DIRECTORY		
DIRECTORY OUTPUT MISSING TOTAL LINE	55.65.1	103
DIRECTORY MAY DISPLAY NONEXISTENT FILES	55.65.2	104
INITIALIZE		
INITIALIZE/INDEX:BLOCK=n NOT RECOGNIZED	56.5.1	105
INSTALL		
INABILITY TO INSTALL EXECUTABLE IMAGES	56.10.1	107
LIBRARIAN		
PROBLEM DECOMPRESSING A LIBRARY	56.15.1	111
LINKER		
LINKER OPEN FILE LIMIT PROBLEM	56.20.1	113
LINKER REJECTS VALID FILE NAMES IN OPTIONS FILES	56.20.2	114
SHOW		
RANDOM BROADCAST CLASSES DISABLED	56.75.1	115
SET PASSWORD		
SET PASSWORD SIGNALS ERRORS TWICE	56.80.1	117
DOCUMENTATION		
SYS\$TRNLNM EXAMPLE IS INCORRECT	65.5.1	119
SNDOPR SYMBOLIC CODE INCORRECT	65.5.2	120
UNDOCUMENTED ERROR MESSAGE FOR MOUNT	65.5.3	121
IVP		
WARNING MESSAGE CAUSES IVP TO FAIL	85.25.1	123
STARLET		
ERROR IN XAB\$ DEFINITIONS	85.50.1	125

TABLE OF CONTENTS (cont.)

<u>Component/ Product</u>	<u>Seq. No.</u>	<u>Page</u>
OPCOM		
BATCH/REMOTE ENABLE OF OPERATOR TERMINALS	95.5.1	127
ERRANT FORMATTING BEHAVIOR IN VAX/VMS PRINT SYMBIONT	95.5.2	129
SYS		
DELETION OF GLOBAL SECTIONS	95.5.3	138
MICROFICHE		
INCORRECT ENTRIES IN VERSION 4.1 MICROFICHE	95.5.4	139

ARTICLES OF GENERAL INTEREST

CUMULATIVE INDEX (VERSION 3.n)	143
CUMULATIVE INDEX (VERSION 4.n)	161
COMPONENTS LIST	165
DIGITAL SOFTWARE LICENSING	175
DIGITAL EQUIPMENT COMPUTER USERS SOCIETY (DECUS)	177

**HELPFUL HINTS
FOR WRITING
SPRs**

HINTS FOR WRITING SPRS

1.0 Introduction

Software Performance Reports (SPRs) exist to benefit customers as well as DIGITAL. They provide information to customers and feedback to DIGITAL about software problems.

The following descriptions provide guidelines for submitting information to DIGITAL so that SPR problems can be solved. Some information is common to all SPRs; other information is requested for only certain types of problems.

2.0 SPR Priority Levels

The following explanations of SPR priorities should be used as a guideline for determining the priority of an SPR. Please note that the priority determination should be based on the system or facility behavior that has actually been experienced at the site and should not be based on the perception of the impact of a potential problem.

Priority	Explanation
1.	MOST PRODUCTION WORK CANNOT BE RUN e.g., important production software is unusable, the system will not boot, necessary peripherals cannot be used as intended, no workaround exists.
2.	SOME PRODUCTION WORK CANNOT BE RUN e.g., certain functions or jobs are not usable, level of performance is not as expected or some documented feature does not work as expected but there is a workaround.
3.	ALL PRODUCTION WORK CAN BE RUN WITH SOME IMPACT ON USER e.g., significant manual intervention is required, performance has degraded but work can still be done.
4.	ALL PRODUCTION WORK CAN BE RUN WITH NO SIGNIFICANT IMPACT ON USER e.g., problem can be patched easily, simple bypass procedure exists.
5.	NO SYSTEM MODIFICATIONS NEEDED TO RETURN TO NORMAL PRODUCTION e.g., suggestion, consultation, documentation error or inquiry.

3.0 General Guidelines

This section covers the information that should be provided with all SPRs. Depending upon the problem, this information will vary in quantity and content. Remember that the more pertinent information that is included, the easier it is for DIGITAL to resolve the problem.

3.1 Scenario

A complete scenario should be supplied, usually in the form of a batch log console listing or SET HOST/LOG output file that shows exactly how the problem is produced. Supplying only the output produced by the problem is not enough. The entire scenario of what was done by the user is needed. The problem may be caused by an interaction between various system events, software packages, devices, SYSGEN parameters, DCL symbols or logical names. Some or all of the displays generated by the following commands may be required for different problems:

```
$ SHOW LOGICAL/ALL/FULL
$ SHOW SYMBOL/ALL/GLOBAL

$ RUN SYS$SYSTEM:SYSGEN
SYSGEN> USE ACTIVE
SYSGEN> SHOW/ALL
SYSGEN> SHOW/SPECIAL
SYSGEN> EXIT
```

3.2 Limit Problem Scope

As much as possible, eliminate all extraneous elements from the scenario. For example, if the execution of a very large program causes a problem, shorten the program to include only the code that causes the problem or write a small program that demonstrates the problem. This action has two benefits: first, logic errors may be discovered; second, the maintainer looking into the problem does not have to comprehend unnecessary material.

3.3 Machine-readable Files

If possible, supply any software needed to reproduce the problem. This may include source programs, image files, sample data, command procedures, logical names etc. If source programs are submitted, also include any libraries or require files referenced. These files must be provided in machine-readable format. Console medium or ANSI magtape are the best media to include with the SPR.

If the problem involves a system crash, include the system dump.

The data should be written to an ODS-2 format disk or an ANSI magtape. For example, the following commands will copy the system dump file to an ANSI magtape:

```
$ INIT MTA0: DUMPS
$ MOUNT/FOREIGN MTA0:
$ BACKUP/IGNORE=NOBACKUP SYS$SYSTEM:SYSDUMP.DMP -
$ MTA0:DUMPS/SAVE
$ DISMOUNT MTA0:
```

NOTE

Since the system dump file is frequently marked NOBACKUP (telling the BACKUP utility to copy the file attributes but not its contents), the dump file be must copied with:

BACKUP/IGNORE=NOBACKUP

This will insure that the file contents are copied, as well as the file attributes. The commands used to write the media should also be provided with the SPR.

On a MicroVAX, where there is no console block storage device, use one of the floppy diskette drives to create machine-readable medium to be included with the SPR. The following commands can be used to copy files:

```
$ INIT $FLOPPY1: SPRDATA
$ MOUNT $FLOPPY1: SPRDATA
$ CREATE/DIRECTORY $FLOPPY1:[DUMP]
$ BACKUP MYDATA.DAT,MYIMAGE.EXE $FLOPPY1:[DUMP]SPRDATA/SAVE
$ DISMOUNT $FLOPPY1:
```

On a full VAX, where there is a console block storage device, the following commands can be used to copy machine-readable data:

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN> CONNECT CONSOLE
SYSGEN> EXIT
```

(At this time, remove the console medium and place a scratch volume in the console block storage device.)

```
$ INIT CSA1: SPRDATA
$ MOUNT CSA1: SPRDATA
$ CREATE/DIRECTORY CSA1:[DUMP]
$ BACKUP MYDATA.DAT,MYIMAGE.EXE CSA1:[DUMP]SPRDATA/SAVE
$ DISMOUNT CSA1:
```

It is important to use BACKUP to write the media submitted with an SPR. Transferring files in a save set produced by BACKUP is much more reliable than copying files to the media.

When machine-readable data is not provided in BACKUP save-set format, include the exact commands that were used to write the data and the commands used for reading it. Other formats are discouraged, since they may cause problems.

All machine-readable media submitted with SPRs will be returned to the customer.

3.4 System Environment

Every computer site runs a different type of workload. Some problems only appear under certain conditions. For example, some sites give different classes of users different base priorities. These sites may encounter problems that other sites do not. This information can be extremely important in resolving the problem, especially for system hangs or system crashes.

Describe any special software packages that are being used. Also, mention any foreign hardware devices or user-written drivers.

Software version numbers should be included. For example, if there is a problem with accessing local symbols during a DEBUG session, the version numbers of DEBUG and all relevant compilers/assemblers should be specified.

If any patches other than those from maintenance updates are being used, they should be mentioned in the SPR.

3.5 User Analysis (Optional)

Optionally, an analysis of the problem may be included. Any useful miscellaneous information should be included, such as, "Without xyz happening, the problem could not be reproduced" or "On version Vx.y, this problem does not occur."

4.0 Problem-specific Information to Include

Resolution of different classes of problems generally requires different kinds of additional information.

NOTE

For those items that are identified with a single asterisk (*), the raw data file (SYS\$ERRLOG:ERRLOG.SYS), not the formatted output from the ANALYZE/ERROR utility, should be included. Formatted output frequently does not include all the information needed to resolve the problem.

For those items that are identified with a double asterisk (**), the raw data file (SYS\$SYSTEM:SYSDUMP.DMP), not the formatted output from the SDA utility, should be included. Formatted output usually does not include all the information needed to resolve the problem.

Problem	Information to Include
System Bugcheck/Crash	<p>A machine-readable copy of the system dump file must be included.** (Output from the SDA utility should <u>not</u> be sent since it usually does not include enough information to resolve the problem).</p> <p>A copy of the error log at the time of the error should also be included because many system problems are triggered by hardware errors.*</p>
Machine-check:	<p>On a machine check, include a machine-readable copy of the error log, not output from the error log generator.*</p> <p>A machine-readable copy of the system dump file should also be included. **</p>
System Hang:	<p>When a system appears "hung" (no response on any terminals), the system should be manually crashed and the system dump file included with the SPR.</p> <p>When the system is shut down in this way, <u>the console listing is very important</u> and should be included with the SPR.</p> <p>On VAX-11/730, VAX-11/780, VAX-11/782, VAX-11/785, and VAX 8600 primary console terminals, enter: (do nothing on the attached processor's console)</p> <p>~P HALT @CRASH</p>

On VAX-11/750 console terminal,
enter:

```
^P
E P
E/I 0
E
E
E
E
D/G F FFFFFFFF
D P 1F0000
C
```

On MicroVAX I:

Push the HALT button on the front panel of the CPU box twice, so that the button is latched out (the red light in the center of the button is out).

Then, on the console terminal, enter:

```
E P
E/I 0
E +
E +
E +
E +
E +
D/G F FFFFFFFF
D P 1F0000
C (Then wait a minute or so)
```

Note: If a CRT is being used, copy the displayed values from the examine commands to paper and submit them with the SPR.

The preceding command sequences cause the VAX or MicroVAX system to bugcheck in a manner that is recognized by VMS developers as a forced crash.

Also include a description of the currently running workload.

VAXclusters:

If all machines in a VAXcluster are "hung" for a reason other than an explainable lack of quorum, a coordinated set of dumps plus console listings from all machines may be required for diagnosis. A coordinated set of dumps is a dump from every machine in the cluster taken in a way that ensures that the lock and other data structures are consistent between all dumps. To take a coordinated dump, first halt every VAX in the cluster. The last machine must be halted no more than 99 seconds after the first machine is halted. After all machines have been halted, crash each machine as directed under SYSTEM HANG, and provide all of the dumps and all of the console logs with your SPR.

Executive:

If it appears that there is a problem with the executive code, include the active values of the system parameters. These can be obtained by invoking SYSGEN and entering both the SHOW/ALL and SHOW/SPECIAL commands.

A machine-readable copy of the source program showing the problem plus libraries, require files, and build files should also be included, if possible.

Also include a copy of the machine-readable error log at the time of the problem. *

Devices:

For any suspected device or device driver error, include a copy of the error log at the time of the problem. *

Corrupted RMS Files:

When an RMS file becomes corrupted by software, an SPR should always be submitted. Items to include with the SPR are:

- 1) A copy of the corrupted file.
- 2) Any programs (preferably with sources) and data that are necessary to reproduce the corruption. Note the distinction between programs that merely demonstrate that the file is corrupt, as opposed to a program that causes the corruption to occur. Please try to trim down the program to isolate the specific operations that led to the corruption.
- 3) A description of how the file is being processed when the corruption occurs. For example, how many users are accessing the file, what kind of operations are being performed on the file (\$UPDATES, \$PUTs, \$DELETES, etc.).

Sometimes accessing a corrupted file can cause nonfatal bugchecks. If it appears that a process is continually disappearing from the system, check the error log for nonfatal bugchecks. If this is the case, include a crash dump with the SPR. To obtain a crash dump (assuming the system manager has given permission), perform the procedure below. Since this procedure will crash the system, it is suggested that it be performed during off-peak hours. Be sure to give adequate warning if there are any users on the system.

```
$ RUN SYS$SYSTEM:SYSGEN
SYSGEN> USE ACTIVE
SYSGEN> SET BUGCHECKFATAL 1
SYSGEN> WRITE ACTIVE
SYSGEN> EXIT
$ RUN PROGRAM_THAT_BUGCHECKS
```

Intermittent:

For a problem that is intermittent or that is not reproducible, include a copy of the machine-readable error log at the time of the problem. *

Command Language
Interpreters:

When submitting an SPR on a command language interpreter, it is important to show all symbols and logical names defined on the system by using the following commands:

```
SHOW SYMBOL/ALL/GLOBAL
SHOW SYMBOL/ALL/LOCAL
SHOW LOGICAL/ALL/FULL
```

Also, indicate whether private or modified command tables are being used.

Job Controller:

If the job controller process encounters a fatal error condition, it aborts execution and restarts itself (as a new process). Upon restart, the system job queue file is not reopened automatically; a START/QUEUE/MANAGER command and appropriate START/QUEUE commands must be manually issued to restart batch and print processing for that node.

For this type of controller problem, include a copy of the console log error message and a machine-readable copy of the job controller process dump written by the system to SYS\$SYSTEM:JOBCTL.DMP. In addition, if the START/QUEUE/MANAGER command fails because of a corrupted system job queue file, also include a machine-readable copy of the queue file. The default queue file name is SYS\$SYSTEM:JB\$SYSQUE.DAT.

Print Symbiont:

Print symbiont process dump:

If the print symbiont exits, a message from the job controller is printed on the console, together with an error message from the print symbiont. Also, a symbiont process dump is written

to SYS\$SYSTEM:PRTSMB.DMP. Include a copy of these console log messages and a machine-readable copy of the symbiont process dump. Also include copies of the displays:

```
SHOW QUEUE/FULL/ALL
SHOW PRINTER (for all
               printer execution queues)
SHOW QUEUE/FORM/FULL
SHOW TERMINAL (all terminal
               execution queues)
```

If a file was involved, include a DIRECTORY/FULL of the file and, if possible, a machine-readable copy of the file. If at all possible, attempt to explain the conditions which directly preceded the symbiont exit, such as commands used or attempted, and/or a detailed description of the symbiont behavior prior to exiting.

Unexpected format or output generated with print symbiont:

If the print symbiont problem exists in the formatting or output of data, include a machine-readable copy of the file and the library modules in use when printing.

Include a DIRECTORY/FULL display of the file and a copy of the displays using the following commands:

```
SHOW QUEUE/FULL/ALL
SHOW QUEUE/FORM/FULL
SHOW PRINTER and/or SHOW TERMINAL
               (whichever is applicable)
```

Along with a description of the explicit PRINT command, include qualifiers and a copy of the FILE TRAILER page. Please provide all information required to reproduce the behavior consistently.

User-written and user-modified symbiont problems:

Describe the problem as completely as possible, including the intent of the user symbiont. Supply all details surrounding the problem and include a well-commented listing of the user-supplied symbiont or

routine. If the problem is associated with the specification of the queue, form, characteristics, parameters, or other input to the DCL command line, include a log file or a description of the PRINT command which demonstrates the problem.

LIBRARIAN:

If there is a problem with the LIBRARIAN, include the following material:

1. A machine-readable copy of the library itself
2. Machine-readable copies of all input files to the library
3. Information (DIRECTORY/FULL) on the library file
4. Information (LIBRARY/LIST/FULL) on the library contents

If the problem can be duplicated at will, include the scenario and any command files used.

LINKER:

If there is a problem with the LINKER, include machine-readable copies of the object files, shareable images, and libraries used in the link, along with a full map (LINK/MAP/FULL).

Debugger:

Include sources, objects, and images for the program being debugged. If the program is large, it would be very helpful to reduce the size of the program to demonstrate the same problem. Also include a log of the debugging session and include the DEBUG.LOG file that the debugger produces.

DECnet:

For a DECnet problem, supply configurations of the systems involved in the problem. This information should include the version numbers of the operating systems and DECnet, the hardware on both systems, and the patch level of the DECnet software on the non-VMS system, if applicable. Depending on the nature of the problem, it might also be applicable to supply hard-copy display of executor, line or circuit parameters and/or counters.

Terminals:

If there is a problem with the terminal driver, provide the following information:

1. A list of terminal characteristics
(SHOW TERMINAL)
2. The type of terminal
3. The type of modem (if any)
4. Any special front-end equipment
5. Any unusual terminal configuration

If the problem involves remote file access, it is often useful for the maintainer to know if the same or similar operation can be performed from a different account, or with the source and destination nodes reversed.

Compiler/Assembler:

If there is a problem with the assembler or a compiler, include the source program that caused the problem. (It is very important to include all require files and libraries that are referenced by the source program).

It is especially important to limit the scope of the problem when submitting SPRs on compilers.

Include the version number of the compiler and the version number of the operating system.

KNOWN PROBLEMS AND RESPONSES
(Version 3.n)

OPERATING SYSTEM: VAX/VMS V3.7
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 1.2.42

CPU time limit is not deductible

PROBLEM
STATEMENT

A subprocess in a multiprocess job is terminated with a CPU time limit exceeded message after using $1/n$ of the job's CPU quota (where n is the number of processes in the job). For example, a job with a CPU quota of 180 seconds creates two subprocesses. No single process in the job can use more than $1/3$ of the CPU time limit (or 60 seconds) before timing out.

The CPU quota is supposed to be a deductible quota but it is not being deducted on a job-wide basis. This causes a problem on systems whose software uses subprocesses extensively.

RESPONSE

A deductible quota is one where a portion of one process' allowance is actually given to another process when the second process is created. That is, the word "deductible" refers to the fact that a portion of the creator's quota is taken away, or deducted, when a subprocess is created. VMS also supports the notion of pooled or shared quotas. A main process in a process tree has a certain allocation and all processes in the same job tree use the same set of quotas. Buffered I/O limit is an example of a pooled quota.

The only example of a deductible quota in VMS is CPU time. (CPU time is also the only example of a consumable resource, one that cannot be borrowed from the system and given back after it is no longer needed.)

When a process creates a subprocess and specifies a CPU time limit, that number of clock ticks is taken away from the creator and given to the subprocess. If a process is created and no CPU time limit is specified for the offspring, VMS arbitrarily gives half of the creator's CPU time limit to the new process. Thus, if a process creates two subprocesses and does not specify a CPU time limit, the first offspring will get half of the creator's CPU time and the second offspring will get half of what is left, or one fourth.

There are two possible alternatives for this application, with VMS treating CPU time limit in its current fashion. If the CPU time limit of the parent is increased, then a larger allocation to each of the offspring can be accommodated. If the parent process explicitly specifies CPU time limits for the offspring processes that it creates, consider a more flexible allocation than $1/n$ of the parent's CPU time limit for each subprocess.

OPERATING SYSTEM: VAX/VMS V3.6
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 1.2.43

High AST latency

PROBLEM
STATEMENT

Occasionally a high priority process experiences AST latency of over 100 milliseconds.

RESPONSE

We expect to fix this problem in a future update of VAX/VMS.

2001 7.15 1000-2000 1000-2000



OPERATING SYSTEM: VAX/VMS V3.6
PRODUCT: VAX/VMS
COMPONENT: LOGINOUT

Seq. 4.4.4

Access violation during subsequent batch jobsteps

PROBLEM
STATEMENT

Certain images cause an access violation if executed during subsequent jobsteps of a multiple step batch job.

RESPONSE

During the LOGOUT of the first jobstep, and just before the LOGIN of the second jobstep, LOGINOUT.EXE makes an assumption that the CLI context block is valid. Unfortunately, LOGINOUT's original rundown deallocated that memory. When an image attempts to use that context block, an access violation results.

Using the DCL command:

```
$ SUBMIT A,B
```

can cause this type of problem to occur.

We expect to correct this problem in a future update of VAX/VMS after Version 4.1.

OPERATING SYSTEM: VAX/VMS V3.5
PRODUCT: VAX/VMS
COMPONENT: F11AACP

Seq. 7.1.11

Index file allocation failure

PROBLEM
STATEMENT

The system crashed with the HDRNOTMAP bugcheck from the file system.

RESPONSE

The crash occurred because of a very fragmented floppy disk.

The file system, in VAX/VMS Version 3, would only make one allocation attempt when extending the index file. If the allocation attempt succeeded, but did not allocate enough space to allow the index file to contain the desired file-ID, the file system would bugcheck the system with the HDRNOTMAP bugcheck.

This problem is corrected in VAX/VMS Version 4.0. As a temporary workaround, preallocate the index file by using the /HEADERS qualifier on the DCL command INITIALIZE.

OPERATING SYSTEM: VAX/VMS V3.6
PRODUCT: VAX/VMS
COMPONENT: RMS

Seq. 7.5.41

SEARCH loses place on RMS\$_PRN errors

PROBLEM
STATEMENT

When a user who only has execute access to the top level of a directory attempts to search the directory tree, unexpected results are produced. For example, if a user has execute access to TEST.DIR, which contains the file A.B and the subdirectory SUBDIR.DIR, both of which allow the user access to read and execute, the following occurs:

Entering the command:

\$ DIRECTORY [TEST...]A.B

produces a protection violation error and two occurrences of A.B;l.

RESPONSE

The logic within RMS, which manages the wildcard directory searches, contained an error which would allow RMS to search a directory twice if it received an error attempting to access a subdirectory.

We expect to correct this behavior in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V3.6
PRODUCT: VAX/VMS
COMPONENT: RMS

Seq. 7.5.42

Invalid %RMS-W-RTB error on stream file

PROBLEM
STATEMENT

An invalid error:

"%RMS-W-RTB, record too large for user's buffer"

is produced if a program attempts to read a stream file record which exactly fits its buffer and the record terminator is split across a block boundary.

RESPONSE

This behavior is caused by an error in the logic which attempts to locate the end of a record in stream format files. If the terminator is split across a block boundary, RMS does not realize that it has encountered a record terminator until it has attempted to store the first byte of the terminator in the user's buffer. If the user's buffer is precisely the size of the data portion of the record, the error noted above is flagged erroneously.

We expect to correct this problem in an update of VAX/VMS after Version 4.1.

OPERATING SYSTEM: VAX/VMS V3.7
PRODUCT: VAX/VMS
COMPONENT: XWDRIVER

Seq. 8.18.2

Point-to-point BSC modifier to \$QIO

PROBLEM
STATEMENT

If a \$QIO write logical or physical with the point-to-point BSC modifier is issued to the XWDRIVER and the user buffer is improperly formatted, R0 is returned with the wrong information. R0 should contain the status code SS\$_ABORT, but instead contains the user buffer address.

RESPONSE

We expect to fix this problem in a future update of VAX/VMS after Version 4.1.

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15. 20. 10. 1950

16. 20. 10. 1950

17. 20. 10. 1950

18. 20. 10. 1950

19. 20. 10. 1950

20. 20. 10. 1950

OPERATING SYSTEM: VAX/VMS V3.4
PRODUCT: VAX/VMS
COMPONENT: LIBRARIAN

Seq. 11.4.10

Long module names confuse LIBRARIAN/LIST

PROBLEM
STATEMENT

Module names longer than 15 characters destroy the format of the output from the LIBRARIAN/OBJECT/LIST/FULL command.

RESPONSE

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V3.5
PRODUCT: VAX/VMS
COMPONENT: LIBRARIAN

Seq. 11.4.11

LBR\$GET_HELP returns wrong flag to output routine

PROBLEM STATEMENT

The LBR\$GET_HELP routine fails to update the HLP\$M_OTHERINFO flag between output routine invocations if the following conditions are met:

1. LBR\$GET_HELP is called with two keys.
2. The subkey is ambiguous.
3. The first matched helptext module contains help subtopics.

RESPONSE

This problem is corrected in VAX/VMS Version 4.1.

OPERATING SYSTEM: VAX/VMS V3.5
PRODUCT: VAX/VMS
COMPONENT: SET TERMINAL

Seq. 11.15.8

Start-up process hangs doing SET TERMINAL

PROBLEM
STATEMENT

SET TERMINAL/WIDTH=n executed from a command procedure hangs if a user types CTRL/S on the terminal while the command is executing and the target terminal has the DEC_CRT attribute set.

RESPONSE

This problem is fixed in VAX/VMS Version 4.0.



B



B



OPERATING SYSTEM: VAX/VMS V3.5
PRODUCT: VAX/VMS
COMPONENT: VMSINSTAL

Seq. 11.36.8

VMSINSTAL ignores device allocated error

PROBLEM
STATEMENT

VMSINSTAL attempts to install software even when the device containing the distribution medium is allocated to another user.

RESPONSE

We expect to fix this problem in a future update of VAX/VMS.

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For the purpose of the study, the following

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1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

OPERATING SYSTEM: VAX/VMS V3.3
PRODUCT: VAX/VMS
COMPONENT: CDU

Seq. 11.42.1

CDU does not allow defaults on lists

PROBLEM
STATEMENT

The Command Definition Utility does not allow default values to be specified for LIST type qualifiers.

RESPONSE

Allowing default values on LIST type qualifiers requires major modifications to the Command Definition Utility.

We will consider this suggestion for a future update of VAX/VMS.

1950-1951

1952-1953

1954-1955

1956-1957

1958-1959

1960-1961

1962-1963

1964-1965

1966-1967

1968-1969

1970-1971

OPERATING SYSTEM: VAX/VMS V3.3
PRODUCT: VAX/VMS
COMPONENT: DECnet

Seq. 20.2.6

Remote process not deleted

PROBLEM
STATEMENT

Under various circumstances, when a remote terminal is disconnected in an abnormal way (for example, not using LOGOUT), the remote terminal process might become compute-bound. When this happens, the process is not correctly deleted.

RESPONSE

This type of behavior can be caused by any of several known problems. VAX/VMS Version 4.0 corrects some of these problems. However, one of these problems is still being investigated and we expect to resolve it in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V3.7
PRODUCT: VAX/VMS
COMPONENT: DECnet

Seq. 20.2.7

Problems with DLM over permanent virtual circuits

PROBLEM STATEMENT

Two VAX systems are connected by means of VAX PSI, and a DECnet circuit is established between them using datalink mapping (DLM). The PSI circuit is a permanent virtual circuit (PVC). If anything goes wrong with the PVC link, the only recovery method is by shutting down the processors. Otherwise, the PVC remains in either the "on-starting" or "on-synchronizing" state.

RESPONSE

There are a number of interactions between X.25 events which are propagated through to the code implementing PVC support within DECnet-VAX and the circuit states within DECnet.

We expect to change this behavior in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V3.6
PRODUCT: VAX/VMS
COMPONENT: DECnet

Seq. 20.2.8

Remote login facility problem

PROBLEM
STATEMENT

When logging off a remote terminal, sometimes control does not return normally to the original node and CTRL/Y must be used to regain control. In this case, the remote terminal process is deleted.

RESPONSE

To the best of our knowledge, this problem is fixed in VAX/VMS Version 4.0. There are, however, similar problems that exist in remote terminal logout. Future updates will include more fixes as we solve these individual problems.



OPERATING SYSTEM: VAX/VMS V3.4
PRODUCT: DECnet
COMPONENT: RMS

Seq. 20.11.4

RSTS filespec incompatibility

PROBLEM STATEMENT

A VMS user trying to access files on a PDP-11/70 running RSTS Version 8.0 cannot properly get directory information or copy files from an account on the PDP-11/70 if the PPN of the RSTS account is not octal.

Examples:

1. \$ COPY RSTS::"DB3:[1,99]XXX.YYY" *.* fails.
2. \$ DIR RSTS::"DB3:[1,99]" returns the first file in the directory and not all of the file names.
3. \$ DIR RSTS::"DB3:[1,99]*.*" returns all the file names but does not display the complete file names.

NOTE

When using octal PPNs and leaving off the quotes around the file specification, the above operations work correctly.

RESPONSE

The effects described are caused by the implications inherent in a quoted file specification. The explanations of the various effects are described below.

1. The problem with wildcard COPY operations.

Since the resulting destination file name is obtained from the source file name, it is necessary to be able to

interpret the source file name. In the case of nonoctal PPNs, VAX/VMS is presented with a file name that does not obey the file-name rules. As a result, the file name must be specified in quotes and, by definition, any interpretation of the resulting file name is disallowed. This, in turn, means that any attempt at assigning destination file names is also disallowed and, hence, it is impossible to construct the destination file names for a wildcarded destination.

2. The problem with DIRECTORY operations not explicitly wildcarded.

In order for DIRECTORY or RMS to look for multiple files, it is necessary to provide a "wildcarded" file specification. Without any wildcard information, RMS assumes that only one file exists that fits the requested specification. The DIRECTORY utility provides wildcard file name searches by specifying a default file name of *.*;* to RMS, which is merged into the file specification that the user included in the DIRECTORY command. This, however, does not work for quoted file specifications, such as "[1,99]", since these are defined to be fully specified and, therefore, none of the default file names from the DIRECTORY utility are included.

3. The problem with DIRECTORY truncating quoted file names.

This is corrected in VAX/VMS Version 4.0. The full quoted file name is now displayed from a DIRECTORY command.

Chapter 9 of the VAX/VMS Version 4.0 Guide to Networking on VAX/VMS discusses the information presented here.

OPERATING SYSTEM: VAX/VMS V3.3
PRODUCT: DECnet
COMPONENT: RTPAD

Seq. 20.14.2

RTPAD and CTRL/O

PROBLEM STATEMENT

The RTPAD protocol is unable to return a CTRL/O to the host node. As a result, all data is transferred through the network and discarded at the server end.

RESPONSE

The old RTPAD protocol has no CTRL/O message. However, VAX/VMS Version 4.0 is using a new remote terminal protocol, called CTERM, that has such a message.

OPERATING SYSTEM: VAX/VMS V3.5
PRODUCT: DECnet
COMPONENT: RTPAD

Seq. 20.14.3

RTPAD single streams terminal \$QIOs

PROBLEM
STATEMENT

RTPAD has a single stream for its \$QIOs. This makes programs that have remote terminals with reads outstanding behave differently than local terminals with reads outstanding.

RESPONSE

This a restriction within RTPAD. We will consider changing this behavior for a future update of VAX/VMS.

KNOWN PROBLEMS AND RESPONSES
(Version 4.n)



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 5.20.1

F\$GETDVI information invalid if disk not mounted

PROBLEM STATEMENT

The F\$GETDVI lexical function does not always return valid information for DSA disks.

RESPONSE

For DSA disks, the correct disk geometry information is unknown until the disk is actually mounted. DSA disks can have different geometry characteristics, even when two packs can be mounted in the same drive.

Since the correct geometry characteristics of a disk cannot be known until it is mounted, all VMS services and features that report disk geometry might report invalid geometry information for any unmounted DSA disk. This includes, but is not limited to:

1. The following F\$GETDVI lexical function item codes -- CYLINDERS, DEVDEPEND, MAXBLOCK, SECTOR, and TRACKS.
2. The following \$GETDVI system service item codes -- DVI\$_CYLINDERS, DVI\$_DEVDEPEND, DVI\$_MAXBLOCK, DVI\$_SECTOR, and DVI\$_TRACKS.
3. Some of the data returned by the IO\$_SENSECHAR function.

This condition is not documented because there is a precedent for returning invalid information when a disk is not mounted. The FREEBLOCKS, MAXFILES, and SERIALNUM are all additional examples of F\$GETDVI item codes that do not return valid information unless the disk is mounted.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 5.20.2

Excessive modified page list writing

PROBLEM STATEMENT

The modified page list is continuously being flushed, even though it has not reached its high limit and there are adequate pages on the free-page list.

RESPONSE

We believe this problem is caused by some users having inadequate working set sizes. If a process has a very small working set, page table pages might need to be removed from the working set frequently, even though they still contain references to pages on the modified list. In order to remove page table pages from memory, VMS must first flush the modified list to disk.

We recommend that the users' default working set size be increased to alleviate this problem.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 5.20.3

GETJPI PROC_INDEX value

PROBLEM
STATEMENT

SYS\$GETJPI returns an incorrect value for the process index.

RESPONSE

The value that \$GETJPI returns for the PROC_INDEX item code is not equal to the index into the PCB vector. When the PID format was changed in VAX/VMS Version 4.0, it was stressed that no assumptions should be made about the internal composition of a process ID. The only statement made was that a process ID was unique across a cluster.

Since many applications were using the low word of the Version 3.n PID as a unique identifier for a process, we invented the PROC_INDEX item code to satisfy this need. However, in a continuing effort to allow maximum flexibility in future releases, a conscious effort was made to have no connection between this \$GETJPI item and internal VMS structures.

The documentation on page SYS-199 of the VAX/VMS System Services Reference Manual states:

The process index number is a number between 1 and the SYSGEN parameter MAXPROCESSCNT, which identifies the process. Although process index numbers are reassigned to different processes over time, at any one instant, each process in the system has a unique process index number.

...The process index is intended to serve users who formerly used the low-order word of the PID as an index number.

The last statement means that the \$GETJPI item will serve as a unique, small-integer identifier. It does not mean that the process index \$GETJPI item has the same value as that displayed by SDA.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 5.20.4

SHUTDOWN with REBOOT_CHECK can fail

PROBLEM
STATEMENT

If a logical name SYS is defined, the system shutdown command procedure SYS\$SYSTEM:SHUTDOWN.COM fails in its REBOOT_CHECK function and issues an incorrect error message indicating that an important system file cannot be located.

RESPONSE

This problem is a result of a naive file-lookup algorithm in the REBOOT_CHECK function. We expect to correct this problem in a future update of VAX/VMS.

The list of logical names one might define to cause this problem is very long. It includes all the files the REBOOT_CHECK function is attempting to locate. Some examples are SYSBOOT, VMB, SYSINIT, F11BXQP, SYS, RMS, DCL, and TTDRIVER.

Until a corrected SHUTDOWN procedure is available, this problem can be avoided by not performing the REBOOT_CHECK function.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 5.20.5

TODR definition removed in VAX/VMS Version 4.0

PROBLEM STATEMENT

In VAX/VMS Version 4.0, the processor register symbol PR\$_TODR is no longer defined in the \$PRDEF macro in LIB.MLB. Moreover, there appears to be no replacement symbol to allow a driver to reference the time-of-day register.

RESPONSE

In July 1983, it was discovered that some future VAX processors would not have a time-of-day register (in addition to several other processor registers). Everything was converted to handle these disappearing registers as processor-specific entities. Also, documenting the change was initiated. In fact, the relevant documentation was sent with the first field test software package for VAX/VMS Version 4.0. However, the critical documentation was inadvertently omitted from the documentation set.

Had the description of this change appeared in the VAX/VMS Version 4.0 documentation, it would have read as follows:

"The following Internal Processor Registers (IPRs) are no longer common to all VAX processors. Their definitions have been removed from \$PRDEF:

- NICR - Interval Clock Next Interval Register
- ICR - Interval Clock Interval Count Register
- TODR - Time of Day Register
- ACCS - Accelerator Control Status Register
- ACCR - Accelerator Reserved
- PME - Performance Monitor Enable

"New CPU-specific processor register definition macros have been added to LIB.MLB, to define the CPU-specific IPRs. The macro names have the format \$PRxxxDEF, where xxx is the number associated with the processor, e.g., \$PR780DEF will define PR780\$_ACCS.

"The only legitimate references to these registers are in CPU-dependent code. These references must use the new CPU-dependent IPR definitions.

"Note, however, that "time-wait loops" must NEVER directly reference the clocks; they MUST use a "time-wait" macro that is CPU-independent. A new, CPU-independent "time-wait" macro has been added to LIB.MLB that should eliminate any need for hand-coded "time-wait" loops. It is called TIMEDWAIT.

"There should no longer be any references to PR\$_ICR or PR\$_TODR to do "time-wait" loops. TIMEDWAIT allows for up to six special-purpose instructions to be placed in its timing loop. However, the loop timing is based on having one BITx and one conditional branch instruction embedded within the loop. Therefore, if a loop has no embedded instructions, adjust the TIME argument accordingly. A good rule of thumb is to add 25% to the TIME argument for a loop with no embedded instructions.

"There are places that reference PR\$_TODR for logging purposes. Two new loadable, CPU-dependent routines, EXE\$READ_TODR and EXE\$WRITE_TODR, have been added for code that must reference this type of value."

The above description will be included in a future version of the VAX/VMS documentation.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 5.20.6

Screen management symbols defined incorrectly

PROBLEM
STATEMENT

The following screen management symbols have been defined incorrectly in STARLET.MLB:

<u>Incorrect name</u>	<u>Correct name</u>
SMGK_TOP	SMG\$K_TOP
SMGK_RIGHT	SMG\$K_RIGHT
SMGK_LEFT	SMG\$K_LEFT
SMGK_BOTTOM	SMG\$K_BOTTOM

RESPONSE

We expect to correct these definitions in an update after VAX/VMS Version 4.1.

A workaround is to extract the erroneous definition, correct it, and reinsert it into STARLET.MLB.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 5.20.7

Temporary mailbox logical names

PROBLEM STATEMENT

After upgrading from VAX/VMS Version 3.7 to VAX/VMS Version 4.0, many users were surprised to learn that temporary mailbox names no longer appear in the group logical name table.

Is it possible to set up a VAX/VMS Version 4 system so that temporary mailboxes will act in a manner that is compatible with VAX/VMS Version 3? Is it possible to define LNM\$TEMPORARY_MAILBOX in the group or system name table so that the behavior change is available on a group or system basis?

RESPONSE

Logical names that are names of TABLES must be placed into one of two logical name directories. One of these directories is process-specific and is located by the name LNM\$PROCESS_DIRECTORY. The other directory is system-wide and is identified by the name LNM\$SYSTEM_DIRECTORY. Thus, logical names that are table names are either process private or system wide.

The simplest solution is to place the redirected temporary mailbox table name into the system directory with the command:

```
$ DEFINE/TABLE=LNM$SYSTEM_DIRECTORY LNM$TEMPORARY_MAILBOX LNM$GROUP
```

Note that this command causes the entire system to revert to VAX/VMS Version 3 behavior with one exception. Processes that create group logical names via the Create Mailbox system service must now have GRPNAM privilege. If certain processes wish to keep the VAX/VMS Version 4 behavior, define the temporary mailbox table name back to LNM\$JOB.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: ACCOUNTING

Seq. 10.5.1

Problems with ACCOUNTING selection by UIC

PROBLEM STATEMENT

When the /UIC=[x,y] qualifier is used on the ACCOUNTING command, all users with either group values of x or member values of y are displayed in the report that is generated. For instance, the command:

```
$ACCOUNTING/FULL/UIC=[156,040]
```

produces a report as though the command had been:

```
$ACCOUNTING/FULL/UIC=( [* ,040] , [156 ,* ] )
```

RESPONSE

An error in the UIC selection logic causes all accounting record UIC selections to proceed as though the selection criteria were based on a wildcarded UIC.

We expect to correct this behavior in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: ACCOUNTING

Seq. 10.5.2

User record displays scroll off screen

PROBLEM STATEMENT

When a full display of user message records is specified, the first line of the user message scrolls out of sight before the ACCOUNTING utility waits for the user to request more of the user message.

RESPONSE

The ACCOUNTING utility attempts to output six lines of user data in a five-line scrolling window. As a result, the first line scrolls out of sight whenever the user data consists of more than five lines.

We expect to correct this behavior in a future update of VAX/VMS after Version 4.1.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYSGEN

Seq. 11.35.1

Discrepancy in SCSNODE name length

PROBLEM
STATEMENT

There is confusion over whether the SCSNODE SYSGEN parameter is really eight characters long, as accepted by SYSGEN, or only six characters long, as documented in the System Generation Utility Reference Manual.

RESPONSE

The behavior described in the System Generation Utility Reference Manual is correct; only six characters of the SCSNODE parameter are used. In a future update of VAX/VMS, we expect that SYSGEN will be changed to respect the length restriction imposed by DECnet.

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OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SYSINIT

Seq. 11.40.1

Quota caching disabled on the system disk

PROBLEM STATEMENT

SHOW DEVICE/FULL on the system disk always shows a quota cache size of 0. The SYSGEN parameter ACP_QUOCACHE has been set to 60. However, every time the system is booted, the quota cache size is set to 0.

The only other way to change the quota size is via the MOUNT command (there is no SET VOLUME/CACHE command). But one cannot mount a system disk, since the system disk is mounted by the system initialization process, SYSINIT.

RESPONSE

This problem is caused by the system initialization process, SYSINIT, which inadvertently set a flag that effectively disabled quota caching when mounting the system disk. This caused the SYSGEN parameter ACP_QUOCACHE to be ignored for the system disk.

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: UPGRADE

Seq. 12.10.1

CVTUAF does not copy user data area

PROBLEM
STATEMENT

The CVTUAF utility, run during the installation of VAX/VMS Version 4.0, did not attempt to copy the user data area from the records in the old UAF.

Does current documentation exist for the user data areas?

RESPONSE

CVTUAF did attempt to copy the user data areas; unfortunately, the attempt was not successful.

We expect to correct this problem in a future update of VAX/VMS.

The user data area is currently not documented in the VAX/VMS Version 4.0 manual set. We expect to add the documentation in future expansions to the Guide to System Security.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: UPGRADE

Seq. 12.10.2

VMSINSTAL fails during Version 4.0 upgrade on TU81

PROBLEM STATEMENT

The VAX/VMS Version 3 to Version 4 upgrade fails if the distribution medium is located on a TU81 tape drive.

RESPONSE

The problem occurs because the upgrade and installation procedures are not configuring the TU81's port device before attempting to configure the TU81's class device. Because of this problem, the procedures fail to locate the TU81 successfully.

A corrected distribution kit, part number BB-EY98A-BE, is available from the Software Distribution Center.

This problem will be corrected with a future, remastered update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: VMSINSTAL

Seq. 12.15.1

VMIBCKERR.TMP inadvertently placed in save set

PROBLEM
STATEMENT

VMIBCKERR.TMP is inadvertently included in the save set when using the GET option of VMSINSTAL.

RESPONSE

We expect to fix this problem in a future update of VAX/VMS after Version 4.1.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: JOBCTL

Seq. 15.15.1

SNDSMB with FILESIZ option fails

PROBLEM
STATEMENT

A \$SNDSMB system service call using the SMO\$K_FILESIZ option causes the Job Controller to loop indefinitely.

RESPONSE

We expect to correct this problem in a future update of VAX/VMS after Version 4.1.

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OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: PRINT

Seq. 15.25.1

Symbiont issues blank pages with /SETUP

PROBLEM
STATEMENT

Extra blank pages are generated by the print symbiont when a setup or reset sequence is specified for the current print job.

RESPONSE

In VAX/VMS Version 4.0, it is possible to create library SETUP/RESET modules which are output to the device during the processing of the current print job. SETUP/RESET modules may be output before a specific file, before all files, or after the current job is completed.

The VAX/VMS Version 4.0 print symbiont incorrectly inserts form feeds after all SETUP or RESET modules, regardless of content. In an update of VAX/VMS after Version 4.1, only those modules which insert printable text will be followed by a form feed. No form feed will be inserted after a recognized escape sequence, device control sequence, or operating system command.

Certain limitations are imposed for output devices which require control sequences in the ASCII range of printable characters. Certain limitations might also exist for those devices which allow the user to reposition output to the top of page after inserting printable text.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: PRINT

Seq. 15.25.2

Suggestion for default form for each queue

PROBLEM
STATEMENT

The documentation in the VAX/VMS Version 4.0 DCL Dictionary for the command DEFINE/FORM conflicts with the documentation for the command PRINT. The documentation for DEFINE/FORM states "If you omit the /FORM qualifier from your PRINT command, your job will be printed using whatever form has been specified for the queue." The documentation for the PRINT command indicates that the default form submitted with a print job is /FORM=0, the default form definition. The VAX/VMS Version 4.0 implementation of the PRINT command is to enter a job in the queue with /FORM=0, even if the queue is initialized with a form type inconsistent with the default form definition.

Is the current behavior of the PRINT command the intended behavior? The desired behavior is the behavior documented in the description for DEFINE/FORM. Will support be added to enable the system manager to define a default form definition for each queue?

RESPONSE

The documentation for the DEFINE/FORM definition in VAX/VMS Version 4.0 should have read: "If you omit the /FORM qualifier from your PRINT command, your job will be printed using the default form definition."

The information regarding default forms on the VAX/VMS Version 4.0 DCL PRINT command is correctly documented.

Support for default form definitions for each queue is currently unavailable. We will consider this inquiry as a suggestion for possible implementation in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: PRINT SYMBIONT

Seq. 15.30.1

How to print headers in 80-column format

PROBLEM
STATEMENT

In the VAX/VMS Version 3.0 print symbiont, the page header fits within an 80-column format. Under VAX/VMS Version 4.0, the page header is printed in a 132-column format. The header is truncated when the command SET PRINTER /WIDTH=80 /TRUNCATE is used.

Is there some way to produce a page header in 80-column format?

RESPONSE

In VAX/VMS Version 3.0, the size of the page header and separation pages is determined by the PAGE and WIDTH attributes of the output device.

In VAX/VMS Version 4.0, the formatting and sizing of the page header and separation pages is determined by the current form definition. If no form is specified on the PRINT command, the default form, DEFAULT, is used with /WIDTH=132 and /LENGTH=66.

To produce a page header properly to a width of 80 columns, define a form with a width of 80 columns.

For example:

```
$ DEFINE/FORM/WIDTH=80/LENGTH=66/STOCK=DEFAULT
  _Form name: FORM_80X66
  _Form number: 2
```

This form must be specified with the PRINT command. For example, to print the file FOOBAR.TXT with page headers and the form FORM_80x66, use one of the following commands:

```
$ PRINT/FORM=FORM_80X66/HEADER FOOBAR.TXT
```

or

```
$ PRINT/FORM=2/HEADER FOOBAR.TXT
```

Consult the VAX/VMS Version 4.0 Guide to System Management and Daily Operations, Section 9.3.3.3 and the DCL Dictionary, page DCL-229, for more detailed information regarding form definition and usage.

NOTE

The /STOCK=DEFAULT qualifier in the form definition indicates the stock type. Stock types in the form definition submitted with the PRINT command must match the stock type of the form definition initialized on the queue. This stock definition allows print jobs with the same stock to be automatically mounted without requiring the operator to change paper stock on the device and reinitialize the queue.

OPERATING SYSTEM: VAX/VMS V4.1
PRODUCT: VAX/VMS
COMPONENT: PRINT SYMBIONT

Seq. 15.30.2

Unexpected symbiont process termination

PROBLEM STATEMENT

The print symbiont terminated abnormally. Immediately thereafter, it appeared that the job controller aborted with an access violation. Upon reboot, the symptoms repeated. Rebooting with STARTUP Pl set to "MIN", then using the DCL command START/QUEUE/MANAGER/NEW_VERSION and reinitializing all queues, restored queue operations. Although the job controller is started with the /DUMP option, no dump is produced.

RESPONSE

In VAX/VMS Version 4.0, the print symbiont and job controller communicate via special messages. These messages contain information regarding errors incurred in the creation of batch jobs or the execution of print jobs. For example, if the job controller receives an error when attempting to open a batch logfile, a special print job is sent to the print symbiont. This print job contains no file identification. The job contains, instead, the error message returned to the job controller. Similarly, if the symbiont receives a fatal error during execution of a print job, a special message is sent to the job controller. This message contains the fatal error message received by the print symbiont. The job controller sends the fatal error message to the operator console with an associated message indicating "unexpected symbiont process termination".

For example, the job controller received an error when attempting to create a batch logfile. The batch job name was ACVCTESTS, for example, and the batch job was issued from the SYSTEM account. The batch logfile creation failed because of the following error:

"LOGIN-F-CLITBLFAIL, error activating command interpreter tables"

This error was sent to the symbiont as a special print job. The symbiont should have properly printed the error message on hard copy as job name "ACVCTESTS" by user name "SYSTEM". However, because of a problem in the creation of file separation pages, the symbiont attempted to use the null filename in the creation of the filename banner and subsequently incurred an access violation.

The access violation is correctly interpreted as a fatal symbiont error. This error was communicated to the job controller just prior to symbiont process termination. The fatal error is sent to the operator's console in two steps. The first OPCOM message sent by the job controller indicates an unexpected symbiont process termination. The second message sent to OPCOM from the job controller is the error which caused the symbiont process termination.

The job controller did not access violate. The symbiont incurred an access violation and the job controller reported the problem.

Deletion of the offending print job and restarting the output queues controlled by this symbiont process should suffice for this type of problem. Rebooting with a new queue file should not be necessary.

We plan to correct this problem in an update of VAX/VMS after Version 4.1.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DECnet

Seq. 25.5.1

Network jobs use default DCLTABLES

PROBLEM
STATEMENT

When a remote DECnet object is invoked using the DECnet default nonprivileged account, DCL is started with the system default DCLTABLES rather than with those specified in the tables field of the DECnet entry in SYSUAF.

RESPONSE

There is a change in VAX/VMS Version 4.0 which forces network jobs to be started with DCL as their default CLI. This allows network access by accounts which are set up to use other CLIs such as MCR for their normal (interactive and batch) use, since network jobs are required to run DCL command procedures such as NETSERVER.COM.

One side effect of this change is the use of the default DCLTABLES instead of any alternate tables defined in the UAF entry. This is necessary because an account using a different CLI, such as MCR, would have a table defined in the UAF entry which would not work correctly with NETSERVER.COM. Therefore, this should be viewed as a restriction.

As a workaround, include the command:

\$ SET COMMAND /TABLE=yourtable

in the LOGIN.COM procedure for the account in question.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DECnet

Seq. 25.5.2

Spurious node unreachable errors

PROBLEM STATEMENT

When executing the following command procedure in a cluster, on the node with the lowest DECnet address:

```
$loop:
$      dir 0::z
$      wait 00:00:01
$      goto loop
```

the following error is reported following 10 to 20 iterations:

```
"%DIRECT-E-OPENIN, error opening 0::Z.*;* as input"
"-RMS-E-FND, ACP file or directory lookup failed"
"-SYSTEM-F-UNREACHABLE, remote node is not currently
reachable"
```

RESPONSE

This is caused by a problem in the code which validates connect requests at the target end of a connection. If an existing logical link exists on the target node from a node with a higher address which has the same link number as the connect request, the request is erroneously dismissed as a duplicate request.

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DECnet

Seq. 25.5.3

STARTNET.COM incorrectly parses node address

PROBLEM
STATEMENT

STARTNET.COM always returns an error when selecting an area designation containing a number that is the same as the DECnet node address. The error indicates that the node address does not agree with the SYSGEN parameter SCSSYSTEMID. The problem is located on the line in STARTNET that is performing character deconcatenation:

```
$ EXEC_AREA = EXEC_AREA - EXEC_LOC - "."
```

RESPONSE

This problem will be corrected in a future update of VAX/VMS. In the meantime, a workaround is to change the line in STARTNET.COM:

```
$ IF EXEC_ADDR .EQS. CLUSTER_NODEADDR THEN GOTO CLOSE_TEMP
```

to the following:

```
$ GOTO CLOSE_TEMP
```

thus bypassing the check. If the node address differs from the SYSGEN parameter SCSSYSTEMID, the problem is caught by NETACP.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DECnet

Seq. 25.5.4

STARTNET.COM fails to check for ALTPRI privilege

PROBLEM
STATEMENT

The privilege ALTPRI is required to run LOADNET.COM from within STARTNET.COM, but STARTNET.COM fails to check for this required privilege.

RESPONSE

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: XDDRIVER

Seq. 32.25.1

Device full error when initializing DMP-11

PROBLEM
STATEMENT

When initializing the DMP-11, the initialization of every tributary after the first one returns the error message:

"%SYSTEM-W-DEVICEFULL, device full - allocation failure"
"%NCP-I-NMLRSP, listener response - Operator failure"

RESPONSE

This problem is fixed in VAX/VMS Version 4.1.



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX BTS
COMPONENT: YQDRIVER

Seq. 32.45.1

YQDRIVER corrupts nonpaged pool

PROBLEM
STATEMENT

Subsequent to the release of VAX BTS Version 1.1, it was discovered that under certain conditions, pressing the <SYS REQ> key on the Bisync terminal caused VMS to crash because of badly corrupted pool.

RESPONSE

Under certain conditions, the <SYS REQ> key sends a zero-length message to the VAX host. YQDRIVER (the BTS port driver) incorrectly detects and handles these zero-length messages; instead, the driver overwrites an arbitrary 64K bytes of nonpaged pool.

Since the <SYS REQ> key is not used in the Bisync environment, there should be little impact on user systems. The problem will be fixed in a future release of BTS; in the interim, there is a patch to YQDRIVER available from your Software Services Support Organization on a demand basis.



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: TTDRIVER

Seq. 33.20.1

VT200 not defined in \$DCDEF

PROBLEM
STATEMENT

\$DCDEF does not contain definitions for new terminals.

RESPONSE

Complete terminal definitions are located only in \$TTDEF and no longer in \$DCDEF. The definitions in \$DCDEF remain only for compatibility with versions of VAX/VMS prior to Version 4.0. All new applications should use the definitions from \$TTDEF for the terminal device types.

The documentation will be further clarified in a future revision of the VAX/VMS I/O User's Reference Manual, Part I, which (as of VAX/VMS Version 4.0) indicates on page 8-18 that \$TTDEF contains symbol definitions for terminal characteristics.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: TTDRIVER

Seq. 33.20.2

DMA not set on DMF-32 lines

PROBLEM
STATEMENT

Under VAX/VMS Version 4.0, any terminal connected to a DMF-32 comes up with /NODMA set.

RESPONSE

The problem is that the DMA bit (40 hex) was not set in the SYSGEN parameter TTY_DEFCHAR2. Setting this bit causes the lines to come up with DMA set.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: LPDRIVER

Seq. 34.20.1

SYSTEM-F-EXQUOTA error on printout

PROBLEM STATEMENT

In VAX/VMS Version 4.0, the error message:

"SYSTEM-F-EXQUOTA, exceeded quota"

is printed when attempting to print a relatively small file (as small as six blocks). The error occurs when the printer is set up with the SET PRINTER/NOFF command. This problem only occurs with a line printer and not with a terminal printer.

RESPONSE

The line printer driver attempts to expand the data to a system buffer which will, in turn, be output by the device. When the printer is set up with the SET PRINTER/NOFF command, the line printer driver interprets a single form feed character as multiple line feed characters. If the expanded data is greater than the system buffer, the line printer driver attempts to allocate more memory. If the amount of memory allocated exceeds the SYSGEN parameter MAXBUF, the symbiont prints the following error message:

"SYSTEM-F-EXQUOTA, exceeded quota"

In VAX/VMS Version 4.0, the print symbiont, job controller, queue manager, and related utilities are completely rewritten. The print symbiont now buffers output to the printer.

The error:

"SYSTEM-F-EXQUOTA, exceeded quota"

in this instance, indicates that the system buffer used by the line printer driver to expand the symbiont output buffer has exceeded the default system maximum buffer size.

As a temporary workaround, increase the SYSGEN parameter MAXBUF to avoid receiving this error. A MAXBUF size greater than 5000 (decimal) might be required.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: RMS

Seq. 40.40.1

Read from SYS\$OUTPUT fails

PROBLEM STATEMENT

With VAX/VMS Version 4.0, the user cannot read from SYS\$OUTPUT. A FORTRAN program such as the following:

```
READ (6,*) VALUE  
END
```

fails with the error message:

```
%FOR-F-ERRDURREA, error during read  
unit 6 file SYS$OUTPUT:.;  
user PC 00000412  
-RMS-F-FAC, record operation not permitted by  
specified file access (FAC)
```

RESPONSE

VAX/VMS Version 4.0 only allows writes to SYS\$OUTPUT (instead of reads and writes, as in previous versions of VAX/VMS) because it is enforcing that the stream is meant for output. Previous versions of VAX/VMS incorrectly allowed reads from SYS\$OUTPUT (and writes to SYS\$INPUT).

However, since many existing programs depend on this capability, the old behavior will be restored in a future update of VAX/VMS after Version 4.1.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: RMS

Seq. 40.40.2

COPY/OVERLAY fails if destination write-protected

PROBLEM STATEMENT

COPY/OVERLAY does not work if the destination file is located on a remote node and the specified version number already exists. Instead of copying the data from the source file to the destination, COPY produces the following error message:

```
"%COPY-E-OPENOUT, error opening NODE::FILE.EXT;l as output"  
"-RMS-E-FEX, file already exists, not superseded"
```

RESPONSE

If a file is protected against write access by the network accessor, an access conflict occurs. If a file is available for write access, the COPY/OVERLAY operation succeeds with no errors. If the destination is protected against the write access request, the operation fails, since the COPY utility uses the create-if option when the /OVERLAY qualifier is specified. For DECnet file operations, this option is simulated within RMS as an \$OPEN or "on-error" \$CREATE sequence. This simulation is attempting the \$CREATE under circumstances other than the definition of create-if allowed. For instance, if the destination file is locked against write access, RMS incorrectly attempts to create a new file. The \$CREATE operation then fails with the error:

```
"-RMS-E-FEX, file already exists, not superseded"
```

since the version in question already exists.

We expect to correct this behavior in a future update of VAX/VMS after Version 4.1 so that RMS returns the correct error from the \$OPEN and does not attempt to create a new file.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: RMS

Seq. 40.40.3

Confusion on \$CREATE using searchlists

PROBLEM STATEMENT

An attempted file creation fails when the destination directory is not located using the first translation of a searchlist.

Attempting, for example, to create:

SYS\$SYSROOT:[SYSMGR.MGRUTIL]FOO.BAR

fails if SYS\$SYSROOT is defined as a searchlist of \$1\$DUA21:[SYS7.], SYS\$COMMON:, where SYS\$COMMON is \$1\$DUA21:[SYS7.SYSCOMMON.] and the destination directory is SYS\$COMMON:[SYSMGR.MGRUTIL].

RESPONSE

The RMS \$CREATE service does not attempt to explore a searchlist fully. Instead, it only attempts to create new files using the first translation of any searchlist logical name that it encounters. In the example, the first translation of the destination (\$1\$DUA21:[SYS7.SYSMGR.MGRUTIL]) did not exist.

This behavior is documented in the Record Management Services Reference Manual on page RMS-40.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: RMS

Seq. 40.40.4

\$RENAME returns incorrect error message

PROBLEM STATEMENT

For VAX/VMS Version 4.0, the RMS \$RENAME service returns the following error when the file to be renamed does not exist:

%RMS-E-ACC, ACP file access failed

Prior to VAX/VMS Version 4.0, \$RENAME would return the following error, which is much more meaningful and appropriate:

%RMS-E-FNF, file not found

RESPONSE

This problem is fixed in VAX/VMS Version 4.1.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: RMS

Seq. 40.40.5

Access control string parsed incorrectly

PROBLEM
STATEMENT

In addition to the user name and password, if an account name is specified in the access control string of a DECnet node specification, there are cases when the password is incorrectly conveyed to the remote node. For example, this occurs when attempting to COPY a file from a remote node to the local system.

RESPONSE

Several utilities, including COPY, use the RMS option open-by-file-id for accessing their input files. This function is simulated for DECnet file access and the logic within RMS which performs this does not properly detect a masked password in the access control string. Thus, the masked password is not replaced by the real one.

We expect to correct this problem in a future update of VAX/VMS after Version 4.1.



9



9



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: Run-Time Library
SUBCOMPONENT: BASIC Language Support

Seq. 45.1.1

VAX BASIC programs return an incorrect ERL for errors 50 and 52

PROBLEM STATEMENT

If all of the following conditions occur, a VAX BASIC program might return an incorrect ERL:

1. Error 50 (Data format error) or Error 52 (Illegal number) must occur.
2. It must occur in a subprogram, external function, or DEF.
3. The compilation in which the error occurs must execute an ON ERROR GO BACK. It can either explicitly execute this statement or implicitly execute it by not having an error handler.
4. One of the outer routines must execute a RESUME.

When the error handler does a RESUME, an access violation occurs. Normal condition handling cannot handle the exception and an improperly handled condition results.

RESPONSE

This problem was introduced with VAX/VMS Version 4.0 and will be fixed in a future update of VAX/VMS. There are two interim workarounds:

1. Add error handling to the subprogram that generated the error.
2. Have the next, outermost routine that has a handler for the specific error execute an ON ERROR GO TO 0.



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: ANALYZE

Seq. 55.5.1

ANALYZE/IMAGE reports incorrect link date and time

PROBLEM
STATEMENT

VAX/VMS Version 4.0 ANALYZE/IMAGE yields an incorrect value for link date and time for images created during VAX/VMS Version 3.n.

RESPONSE

This problem is fixed in VAX/VMS Version 4.1.



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: AUTHORIZE

Seq. 55.10.1

AUTHORIZE has trouble parsing /<access> qualifiers

PROBLEM
STATEMENT

AUTHORIZE has trouble parsing /<access> qualifiers when either 'PRIMARY' or 'SECONDARY' is entered twice.

```
UAF> modify JOE /network=(primary, 1-4, primary, 6-8)
%UAF-E-BADVALUE, error in value specification /PRIMARY/
```

RESPONSE

We expect to redesign this syntax for a future update of VAX/VMS after Version 4.1.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: AUTHORIZE

Seq. 55.10.2

REVOKE/IDENTIFIER does not remove UICs

PROBLEM STATEMENT

The command REVOKE/IDENTIFIER of the AUTHORIZE utility does not seem to work properly. It does not appear to be possible to dissociate an identifier from a UIC with that command.

RESPONSE

There are two types of identifiers: UICs and RIGHTS. A UIC is a personal identity owned by a user or a group of users; these identifiers are their users. A RIGHT is something which a user holds; it is something solid which, if he holds it, allows him the right to access specified resources.

RIGHT identifiers must first be created (or added) to the rights database; then they can be granted or revoked to or from users. UIC identifiers, on the other hand, can be added with their users, but cannot be granted or revoked. The reason is that it does not make any sense to grant a person to another person, but it does make sense to grant a RIGHT to a person.

To dissociate a UIC identifier from a user, use the REMOVE/IDENTIFIER command.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: BACKUP

Seq. 55.20.1

Problem booting standalone BACKUP

PROBLEM STATEMENT

Under some circumstances, standalone BACKUP might request the user to insert the application (third) floppy or TU58 volume before it is through using the second volume.

This will only occur when booting from console media on a VAX with a CI adaptor and disks accessible through the CI (either HSC disks or disks served from other VMS nodes through the MSCP server).

RESPONSE

We expect that this problem will be fixed in a future update of VAX/VMS after Version 4.1. Until then, do not insert the third floppy or TU58 volume immediately after it is requested. Instead, make sure that activity has ceased (i.e., the red light on the TU58 has been off or the floppy drive has stopped clicking) for at least ten seconds before switching volumes. Standalone BACKUP will print a message describing each remote disk which has been configured into the system and is accessible.

Failure to wait a sufficient amount of time might result in some remote disks not being available for the backup.



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: CONVERT

Seq. 55.30.1

CONVERT/RECLAIM may access violate

PROBLEM STATEMENT

When attempting to perform a CONVERT/RECLAIM on an RMS ISAM file, an access violation occurs. The file is large, yet very sparsely populated as a result of many record deletions.

RESPONSE

The index structure of the file is corrupt. However, we believe that CONVERT/RECLAIM should be able to determine that the data it is processing is incorrect, and we expect to enhance CONVERT/RECLAIM to be more robust in a future update of VAX/VMS.

A file corrupted in this manner can be recovered by issuing a CONVERT command such as:

```
$ CONVERT OLD.DAT NEW.DAT
```

This will produce a fresh version of the file, although it will be considerably smaller than the original file because of the scarcity of records in OLD.DAT. In order to preallocate space for the new file to allow for the eventual insertion of more records, use an FDL file which describes the eventual size of the file. EDIT/FDL provides an easy method to specify these parameters.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: CONVERT

Seq. 55.30.2

CONVERT can incorrectly report DUP and SEQ errors

PROBLEM STATEMENT

CONVERT mistakenly complains about segmented keys being out of order when creating a Prolog 1 or 2 ISAM file.

RESPONSE

CONVERT compares segment-by-segment, even if an earlier segment showed the current key to be greater than the previous key. Since all key segments are extracted and concatenated for Prolog 3 files, this problem can be avoided by using Prolog 3 files.

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DIRECTORY

Seq. 55.65.1

DIRECTORY output missing total line

PROBLEM
STATEMENT

In VAX/VMS Version 4.0, DIRECTORY does not display the individual total lines for the various directories specified on the command line.

RESPONSE

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DIRECTORY

Seq. 55.65.2

DIRECTORY may display nonexistent files

PROBLEM
STATEMENT

Issuing a simple DIRECTORY command using a file specification with a node name and no wildcard characters (implicit or explicit) might cause nonexistent files to be displayed in the DIRECTORY output.

RESPONSE

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: INITIALIZE

Seq. 56.5.1

INITIALIZE/INDEX:BLOCK=n not recognized

PROBLEM
STATEMENT

The DCL command INITIALIZE fails to recognize the BLOCK keyword of the /INDEX qualifier.

RESPONSE

We expect to fix this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: INSTALL

Seq. 56.10.1

Inability to install executable images

The INSTALL utility was changed for VAX/VMS Version 4.0 in such a way that upward compatibility of certain executable images could appear to be compromised. INSTALL was modified to disallow the installation of an image that was linked with the /TRACEBACK feature if:

- the image is being installed with privilege(s) or
- the image is being installed with the /EXECUTE_ONLY qualifier (new for VAX/VMS Version 4.0)

If you have images that fall into this category, you should relink those images with the /NOTRACEBACK qualifier specified. A subsequent attempt to install the known image should be successful.

For the occasional instance where relinking is impossible, the following command procedure may be used to eliminate the /TRACEBACK attribute from the image. As documented in the command procedure's comments, the procedure modifies the header of the image to convert it from a /TRACEBACK image into one that looks like it was linked /NOTRACEBACK. Once this procedure has modified the image in this way, there should be no problem INSTALLing the image.

It is highly recommended that the images are relinked as soon as possible. The following command procedure relies on hard-coded image header offsets that may change between major VAX/VMS releases. Therefore, it must be viewed as a temporary solution only, guaranteed to work correctly only as long as these offsets remain unchanged.

NOTE

The linker has certain behavior which relates to this problem. If there is any reference to the symbol SYS\$IMGSTA from anywhere in the image, the linker ignores the /NOTRACEBACK command qualifier and links the image /TRACEBACK anyway. For such images, this command procedure may be used to undo the linker's mistake.

Seq. 56.10.1

```
$ ! This procedure calls PATCH/ABSOLUTE to modify the transfer
$ ! address array for an image. It deletes the first transfer
$ ! address in the array by moving the following 3 entries in
$ ! the array up one position, while placing a zero in the last
$ ! position vacated.
$ !
$ ! This procedure only operates on images containing the address
$ ! SYS$IMGSTA in the first entry in the transfer address array.
$ !
$ ! This procedure is useful for converting an image linked with
$ ! /TRACEBACK into one that no longer has /TRACEBACK. Because
$ ! this procedure uses certain image header offsets as hard-coded
$ ! values, it will remain correct only for Version 4.0 of VAX/VMS
$ ! and for subsequent releases as long as the image header
$ ! offsets remain valid.
$ !
$ ! This procedure requires the specification of one parameter:
$ !
$ ! P1 = Name of the image to be modified
$ !
$ PATCH /ABSOLUTE /NOOUT /NOJOU 'P1'
!
! Determine if the image is linked /TRACEBACK with the
! S0 flavor of SYS$IMGSTA.
!
EXAMINE /WORD 2
DEFINE BASE = \
REPLACE /LONG BASE
80000168
EXIT
80000168
EXIT
EXIT
$ IF $STATUS THEN GOTO PATCH_IMAGE
$ PATCH /ABSOLUTE /NOOUT /NOJOU 'P1'
!
! Determine if the image is linked /TRACEBACK with the
! P1 flavor of SYS$IMGSTA.
!
EXAMINE /WORD 2
DEFINE BASE = \
REPLACE /LONG BASE
7FFEDF68
EXIT
7FFEDF68
EXIT
EXIT
$ IF $STATUS THEN GOTO PATCH_IMAGE
$ EXIT
```

Seq. 56.10.1

```
$
$PATCH_IMAGE:
$ !
$ ! At this point, we have an image that was linked /TRACEBACK.
$ ! Now, modify the transfer address array so that the image
$ ! appears to the system as if it was linked /NOTRACEBACK.
$ !
$ PATCH /ABSOLUTE /OUT='P1' /JOU='P1' 'P1'
!
! Petrieve offset to transfer address array
!
EXAMINE /WORD 2
DEFINE BASE = \
!
! Move the second, third and fourth array elements up one
! longword in the array, thus clobbering the first entry
! (which is SYS$IMGSTA for images linked with /TRACEBACK).
! Since the fourth array element contains a zero, the third
! will contain a zero as well once we're done.
!
EXAMINE /LONG BASE + 4
DEFINE CONTENTS = \
DEPOSIT /LONG BASE + 0 = CONTENTS
!
EXAMINE /LONG BASE + 8
DEFINE CONTENTS = \
DEPOSIT /LONG BASE + 4 = CONTENTS
!
EXAMINE /LONG BASE + 0C
DEFINE CONTENTS = \
DEPOSIT /LONG BASE + 8 = CONTENTS
!
UPDATE
EXIT
```


Faint, illegible text covering the main body of the page, possibly bleed-through from the reverse side.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: LIBRARIAN

Seq. 56.15.1

Problem decompressing a library

PROBLEM STATEMENT

The following error message is generated when attempting to decompress a library:

"-LIBRAR-E-INDEXERR, index error in 'library file-spec'"

RESPONSE

The librarian maintains a copy of library blocks in the virtual address space of the process so that it never needs to read the same block of the library from the disk more than once. When a new library is being created, it is first built within the virtual address space and then written to the disk file after the library is complete. The problem here is that the library is too large to be contained in the process' virtual address space. Solutions to this problem are being investigated for a future update of VAX/VMS.

As a workaround, increase either the virtual page count or the page file quota. The virtual page count may be limited by the system configuration or by the process authorized quota. It may be necessary to raise either or both of these values. The process' PGFLQUOTA may be changed in the User Authorization File with the AUTHORIZE Utility to be effective upon subsequent login. The value of VIRTUALPAGECNT may be changed with the SYSGEN Utility; it will be necessary to reboot the system to use the new value. Usage of virtual memory can be observed with CTRL/T while running the librarian. SHOW PROCESS/ACCOUNT and SHOW PROCESS/QUOTA also give useful information about the virtual memory usage and page file quota.



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: LINKER

Seq. 56.20.1

Linker open file limit problem

PROBLEM STATEMENT

The linker can incur an access violation when processing a large number of object libraries.

RESPONSE

The linker was modified for VAX/VMS Version 4.0 to leave open as many of its input files as possible (subject to the open file limit, of course) between passes as a performance aid. Prior to VAX/VMS Version 4.0, the linker opened and closed its input files up to three times as part of normal processing.

Because of the limit imposed by the librarian on the number of simultaneously open library files, there is occasionally a problem determining which library file to close when it is necessary to do so.

We expect to fix this problem in a future update of VAX/VMS. Until that time, a workaround is to specify an open file limit (FILLM parameter in SYSUAF.DAT) between 16 and 22.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: LINKER

Seq. 56.20.2

Linker rejects valid file names in options files

PROBLEM STATEMENT

The linker rejects some valid file specifications when parsing files that are specified within options files.

RESPONSE

The linker does its own file parsing when processing file specifications given within options files. Unfortunately, the file syntax accepted by the linker and by RMS are not equivalent. In particular, the linker does not accept file names in options files that contain an underscore in the file type.

We expect to correct this problem in a future update of VAX/VMS.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SHOW

Seq. 56.75.1

Random BROADCAST classes disabled

PROBLEM
STATEMENT

Upon logging in, certain BROADCAST classes might be disabled.

RESPONSE

This problem is fixed in VAX/VMS Version 4.1.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: SET PASSWORD

Seq. 56.80.1

SET PASSWORD signals errors twice

PROBLEM
STATEMENT

In VAX/VMS Version 4.0, the SET PASSWORD utility signals error messages twice.

RESPONSE

This problem is caused by an error handling conflict in that image.

We expect to correct this problem in a future update of VAX/VMS.

1971-1972

1973-1974

1975-1976

1977-1978



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Seq. 65.5.1

SYS\$TRNLNM example is incorrect

PROBLEM
STATEMENT

The FORTRAN code for the translate logical name services example in the VAX/VMS System Services Reference Manual is incorrect.

RESPONSE

We will correct this example in a future revision of the VAX/VMS documentation set.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Seq. 65.5.2

SNDOPR symbolic code incorrect

PROBLEM
STATEMENT

The \$SNDOPR service, which is described in the VAX/VMS System Services Reference Manual, lists an incorrect symbolic code, OPC\$M_NM_CENTRAL.

RESPONSE

The correct symbolic code, OPC\$M_NM_CENTRL, will be documented in the next revision of this manual.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: DOCUMENTATION

Seq. 65.5.3

Undocumented error message for MOUNT

PROBLEM
STATEMENT

The following error message is not documented in the VAX/VMS System Messages and Recovery Procedures Reference Manual:

%MOUNT-I-REDCACHE, volume mounted with reduced cache size

RESPONSE

This message was erroneously omitted, but will be included in the next revision of the system messages manual. The following information should have been included.

REDCACHE, volume mounted with reduced cache size

Facility: MOUNT

Explanation: This informational message occurs when the /PROCESSOR=UNIQUE qualifier is used on the MOUNT command and insufficient paged pool is available to allocate a file system buffer cache using the sizes specified by the ACP_MAPCACHE, ACP_DIRCACHE, ACP_HDRCACHE and ACP_DINDXCACHE SYSGEN parameters. Instead, a unique cache with a minimal number of buffers is allocated.

User Action: The usual reason to use the /PROCESSOR=UNIQUE qualifier before VAX/VMS Version 4.0 was to avoid the problem of file system activity on one volume degrading file system performance on other volumes. This degradation was caused by the single threaded nature of the file system ACP.

In VAX/VMS Version 4.0, the procedure-based file system XQP provides a higher level of concurrency than was previously possible even with multiple ACPs. The /PROCESSOR qualifier was retained to allow discrete I/O buffer caches to be associated with specific volumes, instead of all volumes sharing the same I/O buffer cache, which is the default behavior.

Therefore, the recommended action is to remove the /PROCESSOR=UNIQUE qualifier. However, if discrete I/O buffer caches are needed, increase the size of the SYSGEN parameter PAGEDYN to account for the number of I/O buffers required. Also, increase the value of the SYSGEN parameter SYSMWCNT, to avoid increased system paging.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX COBOL V3.1
COMPONENT: IVP

Seq. 85.25.1

Warning message causes IVP to fail

PROBLEM
STATEMENT

When the user chooses to run the Installation Verification Procedure (IVP), chooses not to save the IVP file in [SYSTEST], and chooses to purge files replaced during the installation, for example,

- * Do you want to run the IVP after the installation [YES]? Y
- * Do you want to leave COBOLIVP.COM in the [SYSTEST] directory [YES]? N
- .
- .
- .
- * Do you want to purge files replaced by this installation [YES]? Y

the following message appears at the end of the procedure:

Successful test of VAX COBOL V3.1-38
%PURGE-W-SEARCHFAIL, error searching for VMI\$ROOT:[SYSTEST]COBOLIVP.COM;
-RMS-E-FNF, file not found
%VMSINSTAL-E-IVPFAIL, The IVP for COBOL V3.1 has failed.

RESPONSE

If the IVP produced a "Successful test of VAX COBOL V3.1-38" message, the installation was successful, regardless of the inconsequential VMSINSTAL failure message at termination.

This misleading message will be fixed in a release of VAX COBOL following Version 3.1.

OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX PASCAL V2.6
COMPONENT: STARLET

Seq. 85.50.1

Error in XAB\$ definitions

PROBLEM STATEMENT

VAX PASCAL programs that reference XABs as they are defined in the VAX PASCAL STARLET no longer execute properly.

RESPONSE

The STARLET.PAS that shipped with VAX PASCAL V2.6 contains XAB\$ fields that are not properly positioned in the XAB\$TYPE record.

The problem can be worked around by cutting the XAB\$TYPE record definition from the older version of STARLET.PAS (it was shipped with VAX PASCAL V2.3), editing it into the new version, and then recompiling with the following commands:

```
$ SET DEFAULT SYS$LIBRARY
$ PASCAL/NOOBJ/ENV=STARLET.PEN STARLET
```

This problem will be fixed in a future version of VAX PASCAL.



OPERATING SYSTEM: VAX/VMS V4.0
PRODUCT: VAX/VMS
COMPONENT: OPCOM

Seq. 95.5.1

Batch/remote enable of operator terminals

PROBLEM STATEMENT

VAX/VMS provides the ability to set up a terminal as an operator error log using the REPLY/ENABLE command. However, this requires that the operator be logged on to the terminal. It is highly desirable to extend the functionality of this command to set up terminals remotely by allowing the addition of a terminal device name. This, in turn, allows terminals to be set up for operations in the system start-up files.

RESPONSE

It is possible to set up user terminals as operator terminals in the SYSTARTUP.COM file. Please consider including the following commands in this command procedure. Also, note that this method can be used to disable operator messages on OPA0.

To successfully execute the DCL command REPLY/ENABLE from a command procedure, the following must be done:

```
$! ENABLE.COM                                ;ENABLE USERS TERMINAL
$!
$ ASSIGN/USER _TTA0:                          SYS$COMMAND
$ REPLY/ENABLE
$ EXIT
```

This method can be used to execute other REPLY commands from a command procedure. For example, REPLY/DISABLE:

```
$! DISABLE.COM           ;DISABLE BROADCAST ON OPA0:
$!
$ ASSIGN/USER _OPA0:      SYS$COMMAND
$ REPLY/DISABLE
$ EXIT
```

and REPLY/LOG:

```
$! OPRLOG.COM            ;CLOSE CURRENT OPERATOR'S LOG
$!
$ ASSIGN/USER _TTA0:      SYS$COMMAND
$ REPLY/LOG
$ EXIT
```

ERRANT FORMATTING BEHAVIOR IN VAX/VMS PRINT SYMBIONT

The goals of this document are to describe the desired behavior of the print symbiont for formatting files to paper, to explain errant formatting behavior in the VAX/VMS Version 3.n and Version 4.0 print symbionts, to demonstrate the masking effect of certain hardware, and to present the expected VAX/VMS formatting behavior in a future maintenance update.

Neither the VAX/VMS Version 3.n nor the VAX/VMS Version 4.0 print symbiont properly formats the first data line of a page to the first printable line of the paper. Both of these versions are inconsistent in formatting data to the paper, but in different ways.

Desired Formatting Behavior

The desired behavior for formatting data to the printed page is described below:

- 1) The first data line of a page should appear on the first printable line of the paper, regardless of the carriage control type of an input file.
 - 2) Placement of headings and data on subsequent pages of paper copy should be consistent with the placement of headings and data on the first page.
 - 3) When a header is requested, the header should appear consistently on the first printable line of the paper on every page.
 - 4) When a standard VAX/VMS print symbiont header is requested, the first data line after the header should appear on the third printable line of the paper.
-

Current Formatting Behavior

In VAX/VMS Version 3.n, for files with carriage control of FORTRAN (FTN), PRINT (PRN), or implied (CR), the first data line of the page appears consistently on the second printable line of the paper. Furthermore, when a header is requested, the header is printed on the second printable line of the paper on the first page and on the first printable line of the paper on subsequent pages. Data lines following the header are similarly in error as a result of the header positioning. Files with carriage control type of NONE in Version 3.n are formatted correctly so that the first data line of every page is output to the first printable line of the paper. However, when /HEADER is specified in a file of carriage control type of NONE, headers are printed on the second printable line of the paper.

In VAX/VMS Version 4.0, the print symbiont's main format routine attempts to format the data to ensure that the first data line of every page starts on the first printable line of the paper. Nevertheless, the first data line of a file with FTN or PRN carriage control is printed consistently on the second line of the first page and the first line of subsequent pages. Furthermore, when a header is requested in a file with FTN and PRN type carriage control, the first data line from the file is printed on the fourth printable line on the first page and on the third printable line on subsequent pages. Files with CR and NONE type carriage control are formatted correctly in VAX/VMS Version 4.0 so that the first data line of every page is output to the first printable line of the paper. Similarly, when /HEADER is specified in a file with CR and NONE carriage control, the first data line output from the file is printed correctly on the third printable line of the paper.

The following tables describe Version 3.n and Version 4.0 behavior, respectively:

Seq. 95.5.2

Version 3.n PRINT/FEED

=====					
	PRINTABLE		CARRIAGE CONTROL TYPE		
	LINE	FTN	PRN	CR	NONE
FIRST PAGE	1	-	-	-	data
	2	data	data	data	data
	3	data	data	data	data
	4	data	data	data	data
	.				
SUBSEQUENT PAGES	1	-	-	-	data
	2	data	data	data	data
	3	data	data	data	data
	4	data	data	data	data
	.				

Version 3.n PRINT/FEED/HEADER

=====					
	PRINTABLE		CARRIAGE CONTROL TYPE		
	LINE	FTN	PRN	CR	NONE
FIRST PAGE	1	-	-	-	-
	2	header	header	header	header
	3	-	-	-	data
	4	data	data	data	data
	.				
SUBSEQUENT PAGES	1	header	header	header	data
	2	-	-	-	data
	3	data	data	data	data
	4	data	data	data	data
	.				

Version 4.0 PRINT/FEED

	PRINTABLE LINE	CARRIAGE CONTROL TYPE			
		FTN	PRN	CR	NONE
FIRST PAGE	1	-	-	data	data
	2	data	data	data	data
	3	data	data	data	data
	4	data	data	data	data
	.				
SUBSEQUENT PAGES	1	data	data	data	data
	2	data	data	data	data
	3	data	data	data	data
	4	data	data	data	data
	.				

Version 4.0 PRINT/FEED/HEADER

	PRINTABLE LINE	CARRIAGE CONTROL TYPE			
		FTN	PRN	CR	NONE
FIRST PAGE	1	header	header	header	header
	2	-	-	-	-
	3	-	-	data	data
	4	data	data	data	data
	.				
SUBSEQUENT PAGES	1	header	header	header	header
	2	-	-	-	-
	3	data	data	data	data
	4	data	data	data	data
	.				

Seq. 95.5.2

Formatting Behavior Altered by Hardware

Each line printer interprets horizontal and vertical format effectors into the proper physical action for that type of printer. Some of the older high-speed line printers mask one or more format effectors that immediately follow a form feed. This action can alter the placement of the first line of data on the page; for example, when a line feed that follows a form feed is ignored, the first printable data line will appear one line above its intended placement. Therefore, the output of such a printer with either VAX/VMS Version 3.n or Version 4.0 disagrees with the previous tables.

The following table was generated on a high-speed line printer that exhibited this masking behavior. The VAX/VMS Version 3.n print symbiont was used to demonstrate the resulting effect.

Masked 3.n behavior PRINT/FEED

=====					
	PRINTABLE	CARRIAGE CONTROL TYPE			
	LINE	FTN	PRN	CR	NONE
FIRST PAGE	1	-	-	-	data
	2	data	data	data	data
	3	data	data	data	data
	4	data	data	data	data
	.				
SUBSEQUENT PAGES	1	data	data	data	data
	2	data	data	data	data
	3	data	data	data	data
	4	data	data	data	data
	.				

Masked 3.n behavior PRINT/FEED/HEADER

=====					
	PRINTABLE	CARRIAGE CONTROL TYPE			
	LINE	FTN	PRN	CR	NONE
FIRST PAGE	1	header	header	header	header
	2	-	-	-	data
	3	data	data	data	data
	4	data	data	data	data
	.				
SUBSEQUENT PAGES	1	header	header	header	data
	2	-	-	-	data
	3	data	data	data	data
	4	data	data	data	data
	.				

Seq. 95.5.2

Expected Future Formatting Behavior

In a maintenance update after VAX/VMS Version 4.0, we expect to format data to the paper correctly. The first data line of the first and subsequent pages will print on the first printable line of the paper. This desired behavior will be achieved by the application of certain rules during the processing of the file.

a) Line Overflow:

If /WRAP or /TRUNCATE is enabled and the print symbiont detects an attempt to output data past the right margin, a carriage return-line feed pair is inserted in the data stream.

b) Page Overflow:

If /FEED is enabled and a vertical format effector attempts to position output into the bottom margin, that vertical format effector is replaced with a form feed. Vertical format effectors include line feed, form feed, and vertical tab.

The following table describes the expected behavior:

Expected behavior after Version 4.0 PRINT/FEED

=====					
	PRINTABLE	CARRIAGE CONTROL TYPE			
	LINE	FTN	PRN	CR	NONE
FIRST PAGE	1	data	data	data	data
	2	data	data	data	data
	3	data	data	data	data
	4	data	data	data	data
	.				
SUBSEQUENT PAGES	1	data	data	data	data
	2	data	data	data	data
	3	data	data	data	data
	4	data	data	data	data
	.				

Expected behavior after Version 4.0 PRINT/FEED/HEADER

=====					
	PRINTABLE	CARRIAGE CONTROL TYPE			
	LINE	FTN	PRN	CR	NONE
FIRST PAGE	1	header	header	header	header
	2	-	-	-	-
	3	data	data	data	data
	4	data	data	data	data
	.				
SUBSEQUENT PAGES	1	header	header	header	header
	2	-	-	-	-
	3	data	data	data	data
	4	data	data	data	data
	.				

Seq. 95.5.2

The intent of this article is to describe errant formatting behavior in the VAX/VMS print symbiont, to demonstrate the error masking effect of hardware, and to present our strategy for solving this problem.

The VAX/VMS print symbiont will continue to support well-formatted printable files. A well-formatted file does not rely on the page overflow and line wrap logic of the print symbiont. Such a file includes all the necessary carriage control information to ensure proper positioning of the text at all page boundaries.

OPERATING SYSTEM: VAX/VMS (all versions)
PRODUCT: VAX/VMS
COMPONENT: SYS

Seq. 95.5.3

Deletion of global sections

PROBLEM STATEMENT

When a global section is created, mapped to a file, and then deleted, the file cannot be deleted immediately. Instead, an error message is returned indicating that the file is locked by another user.

RESPONSE

When a global section is deleted, there are a number of data structures that must be released. \$DGBLSC marks the global section for delete and moves it out of the normal search path. After all references to it are removed, the section actually evaporates and the file is available to be deleted. The following system services should be called (in the order listed below) to release all references:

1. \$UPDSEC - to write back all modified pages to the section file on the disk (this does reset the modified flag in the page table entry).
2. \$DELTVA - to unmap all references to the global section (i.e., page table entries that map to the section).
3. \$DGBLSC - to release the data structures that define the global section.
4. \$DASSGN - to release the channel that was passed as an input parameter to \$CRMPSC (this is also done by image rundown if not specifically requested by the user).

OPERATING SYSTEM: VAX/VMS V4.1
PRODUCT: VAX/VMS
COMPONENT: MICROFICHE

Seq. 95.5.4

Incorrect entries in Version 4.1 microfiche

The VAX/VMS Version 4.1 microfiche index contains some incorrect entries. Those entries in the Version 4.1 index, starting with the MANAGE facility and extending to the end of the index, refer to incorrect page number and/or frame number. In all cases, the correct page number will be within one page of the page number indicated on the microfiche.

The VAX/VMS Version 4.0 index should be retained and used in place of the VAX/VMS Version 4.1 index, except when referencing the new listings that were shipped with the Version 4.1 microfiche. All new entries in the Version 4.1 index, for listings distributed with that version, are correct.

This error will be corrected and will not be carried over into future microfiche updates.



CUMULATIVE INDEX
(Version 3.n)



VAX/VMS SYSTEMS DISPATCH
CUMULATIVE INDEX FOR VAX/VMS V3.n
JULY 1985

Following is a listing of all articles for VAX/VMS V3.n and layered products.

The following components list was designed so that in future issues it could be expanded. Consequently there are several numbers "reserved" for that purpose. Also, within each category the numbering scheme allows for expanding the primary category to include related subsets. For example, under 11.0, UTILITI 11.1 may be used for the COPY UTILITY, 11.2 may be used for the DIFFERENCES UTILITY, etc. Periodically, the components list will be reviewed to insure that it accommodates the current software needs.

R = indicates a republished article

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
<u>VAX/VMS V3.0</u>				
VMS EXECUTIVE				
SYS	1.2.1	SHAREABLE IMAGE RESTRICTION	V3.0	Nov 82
	1.2.2	CRASH WITH USER-WRITTEN DRIVER	V3.0	Nov 82
	1.2.3	VERSION 3.0 POWERFAIL RESTART ERROR ON MASSBUS	V3.0	Jan 83
	1.2.4	CPU TIME LIMIT ERRORS	V3.0	Jan 83
	1.2.5	NETWORK ASSIGN FAILS	V3.0	Mar 83
	1.2.6	FLX TRANSFER OF UNFORMATTED BINARY FILES	V3.0	May 83
	1.2.7	SET MODE INAPPROPRIATE FOR DISK DEVICES	V3.0	May 83
	1.2.8	EXCESSIVE UBA PASSIVE RELEASES	V3.0	May 83
	1.2.9	NO ELEVATED PRIVILEGES FOR EXIT HANDLER	V3.0	Jul 83
	1.2.10	\$ASSIGN TO NET WITH LOGICALS	V3.0	Jul 83
	1.2.11	LOCK CONVERSIONS TO SAME MODE	V3.0	Jul 83
	1.2.12	PFN-MAP GLOBAL SECTIONS IGNORE PROTECTION	V3.1	Jul 83
	1.2.13	SS\$ NOTALLPRIV NOT ALWAYS RETURNED	V3.2	Jul 83
	1.2.14	LOCAL MEMORY ADDRESS SET TOO HIGH	V3.2	Sep 83
	1.2.15	RX02 DOUBLE DENSITY PROBLEM	V3.3	Jan 84
	1.2.16	MORE DETAIL ON EXQUOTA	V3.2	Jan 84
	1.2.17	TPARSE SUBEXPRESSION AMBIGUITY TEST FAILS	V3.2	Jan 84
	1.2.18	VOLNUMBER DIFFERENT FROM SHOW DEVICE	V3.2	Jan 84
	1.2.19	INITIAL VALUE OF THE LOCK STATUS BLOCK	V3.4	May 84
	1.2.20	LIB\$FIND FILE FAILS AFTER 120 CALLS	V3.4	May 84
	1.2.21	VMSIMAGES FILE IS DIFFERENT ON VAX-11/730 AND VAX-11/780	V3.4	May 84
	1.2.22	PROBLEMS WITH BOOTBLDR	V3.4	May 84
	1.2.23	F\$MODE RETURNS BATCH WHEN F\$GETJPI RETURNS INTER	V3.4	May 84
	1.2.24	UNABLE TO BOOT WITH CACHE DISABLED	V3.5	Sep 84
	1.2.25	POWERFAIL OF SECOND UBA ON 11/750	V3.4	Sep 84
	1.2.26	LOOP EXEC OR LOOP NODE ERROR	V3.5	Sep 84
	1.2.27	BOOTBUILDER INIT/DENSITY PROBLEM	V3.6	Nov 84
	1.2.28	BOOTBUILDER MEMORY GAP PROBLEM	V3.6	Nov 84
	1.2.29	WRITEBOOT NEEDED WHEN VERSION 3.5 IS INSTALLED	V3.5	Jan 85
	1.2.30	IMPROPERLY FORMATTED ERROR MESSAGES	V3.5	Jan 85
	1.2.31	EXCESSIVE SWAPPING TO GET BALANCE SET SLOT	V3.5	Jan 85
	1.2.32	SWAPPER TRIMS REAL-TIME PROCESSES	V3.5	Jan 85
	1.2.33	ACCESS VIOLATION WITH ANALYZE/DISK	V3.6	Mar 85
	1.2.34	\$GETJPI FAILS ON PROCESSES IN MWAIT	V3.1	Mar 85
	1.2.35	READS WITH PROMPTS TO A MAILBOX DO NOT PROMPT	V3.3	Mar 85
	1.2.36	MOUNTED DEVICE NOT DEALLOCATED AT LOGOUT	V3.5	Mar 85
	1.2.37	SECTBLFUL ERROR WHILE ACTIVATING IMAGE	V3.6	Mar 85
	1.2.38	NO WORKING SET TRIMMING FOR LOW PRIORITY BATCH JOB	V3.4	Mar 85
	1.2.39	PROBLEMS WITH VAX-11/750 MICROCODE	V3.5	May 85
	1.2.40	\$GETJPI FAILS WITH NULL PROCESS REQUEST	V3.6	May 85
	1.2.41	TU78 UNUSABLE AFTER WARM RESTART	V3.7	May 85

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
	1.2.42	CPU TIME LIMIT IS NOT DEDUCTIBLE	V3.7	Jul 85
	1.2.43	HIGH AST LATENCY	V3.6	Jul 85
BATCH, SPOOLING, JOB CONTROLLER				
BATCH	2.1.1	MAXJOBS NOT HONORED	V3.0	Sep 83
	2.1.2	HOW CAN A BATCH JOB DETERMINE ITS ENTRY NUMBER	V3.4	Jul 84
QUEUE MANAGER	2.2.1	JOB ID NUMBER IS SOMETIMES NOT UNIQUE	V3.2	Nov 83
JOB CONTROLLER	2.3.1	BATCH JOB INPUT FROM CARD READER FAILS	V3.0	Jan 83
	2.3.2	TRUNCATED ACCOUNT FIELD	V3.0	Jan 83
PRINT SYMBIONT	2.4.1	PRINT/HEADER SKIPS LINE ON FIRST PAGE	V3.0	May 83
	2.4.2	SPOOLED DEVICES LOSE FILES	V3.0	May 83
	2.4.3	PRTSMB COMPUTES OVERPRINT INCORRECTLY	V3.1	May 83
	2.4.5	PRINT/FLAG MISHANDLES PRINT/COPIES	V3.1	Jul 83
INPUT SYMBIONT	2.5.1	ALLOW MORE FLEXIBLE PLACEMENT OF EOF CARD	V3.1	Jul 83
QUEUE	2.6.1	START/QUEUE ISSUED TO START A PRINT SYMBIONT	V3.3	May 84
LOCK MANAGER	2.7.1	PROBLEM WITH INNER MODE LOCKING	V3.6	Jan 85
CONSOLE, BOOTING, SYSGEN				
SYSGEN	3.1.1	RELOAD OF DRIVER WITH INCREASED UNITS	V3.0	Nov 82
	3.1.2	SET TIME WRITES ACTIVE PARAMETERS	V3.0	Mar 83
	3.1.3	ATTEMPTING TO INSTALL SECONDARY PAGING FILE	V3.3	Jan 84
	3.1.4	CRASH WHEN CONNECTING SOFTWARE DEVICE	V3.5	Sep 84
	3.1.5	SYSGEN SHOULD SET CBT BIT FOR CR/NOCONT	V3.4	Sep 84
SYSBOOT	3.2.1	SYSBOOT NOT COPIED CONTIGUOUSLY	V3.4	May 85
DCL, OPERATOR FUNCTIONS, MESSAGES				
ACCOUNTING	4.1.1	ACCOUNTING TIME SPECIFICATION PROBLEM	V3.0	May 83
	4.1.2	ACCOUNTING/SUMMARY/ID GIVES AN ERROR	V3.0	May 83
	4.1.3	ACCOUNTING UICs >3 CHARACTERS CAUSE TERMINATION	V3.0	May 83
	4.1.4	ACCOUNTING SORT REJECTS BLANK FIELDS	V3.0	May 83
	4.1.5	ACC/SUM/NOREPORT GIVES AN ERROR MESSAGE	V3.0	May 83
	4.1.6	CTRL/C TO ACCOUNTING DOES NOT RESTORE VT100	V3.0	May 83
	4.1.7	ACCOUNTING SUMMARY HAS OUTPUT FORMAT ERRORS	V3.0	May 83
	4.1.8	REPORT OF PAGES PRINTED IS INCORRECT	V3.0	May 83
	4.1.9	ACCOUNTING UIC EXCLUSION DOES NOT WORK	V3.0	May 83
	4.1.10	ACCOUNTING SUMMARY INCLUDES INVALID DATA	V3.0	May 83
	4.1.11	WILDCARDING DOES NOT WORK WITH ACCOUNTING	V3.0	May 83
	4.1.12	ACCOUNTING/FULL DOES NOT WORK WITH PAGES >24	V3.1	May 83
	4.1.13	ERRORS ACCESSING ACCOUNTING FILE	V3.0	Jul 83
	4.1.14	ACCOUNTING/SUMMARY KEYWORDS CANNOT BE ABBREVIATED	V3.1	Jul 83
	4.1.15	ACCOUNTING/OUTPUT SHOULD NOT DEFAULT TO SYS\$OUTPUT	V3.1	Jul 83
	4.1.16	FALSE SYSINIT RECORDS IN ACCOUNTING FILE	V3.1	Sep 83
	4.1.17	BAD NUMBER OF PAGES FOR ZERO PAGESIZE PRINTERS	V3.0	Sep 83
	4.1.18	ELAPSED TIME FOR JOBS BASED ON QUEUE TIME	V3.1	Sep 83
	4.1.19	REENABLING LOGIN FAILURES	V3.2	Jan 84
	4.1.20	ACC SYMBOLS SIGNALS DUPSYM	V3.1	Sep 84
	4.1.21	ACCOUNTING SUMMARY GENERATED INTEGER OVERFLOW	V3.1	Sep 84
AME	4.2.1	AME WTLO\$ DOES NOT ALLOW GROUP GLOBAL EFN	V3.0	Jan 83
	4.2.2	REPEATED MRKT\$ CALLS OVERFLOW VIRT ADR SPACE	V3.0	Mar 83
	4.2.3	SPWN\$ DOES NOT WORK WITH MCR DEFAULT CLI	V3.0	May 83
	4.2.4	AME DOES NOT CLOSE AN IMAGE BEFORE CHAINING	V3.0	May 83
	4.2.5	AME CANNOT HANDLE MULTIPLE MAC /CR IN GRP	V3.1	Jul 83
	4.2.6	WRONG ERROR FOR > 9 CHARACTER FILENAME	V3.0	Sep 83

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
DCL	4.3.1	SPAWN CPU LIMIT	V3.0	Nov 82
	4.3.2	ON CONDITION THEN @FILESPEC	V3.0	Nov 82
	4.3.3	F\$VERIFY (LOWER CASE) EVALUATES INCORRECTLY	V3.0	Jan 83
	4.3.4	CLI\$GET VALUE RETURNS 0	V3.0	Jan 83
	4.3.5	EXPRESSION GREATER THAN 508 BYTES FAILS	V3.0	Mar 83
	4.3.6	CLI\$ ABSENT NOT RETURNED IN CERTAIN CASE	V3.0	Mar 83
	4.3.7	AST QUOTA EQUAL ZERO CAUSES PROCESS TO HANG	V3.0	May 83
	4.3.8	ERROR EXIT NOT TRAPPED	V3.0	May 83
	4.3.9	FAIL TO ACTIVATE LOGINOUT	V3.0	May 83
	4.3.10	GROUP LOGICAL NAMES ARE SKIPPED BY \$DELLOG	V3.0	May 83
	4.3.11	NEGATABLE INVALID AS KEYWORD	V3.0	May 83
	4.3.12	CDU DOES NOT CATCH AMBIGUOUS QUALIFIERS	V3.1	May 83
	4.3.13	EDIT/NOOUTPUT	V3.0	Jul 83
	4.3.14	P1-P8 IN LOGIN.COM	V3.1	Jul 83
	4.3.15	SPAWN INPUT FILE NOT FOUND	V3.1	Jul 83
	4.3.16	F\$INTEGER HELP TEXT	V3.1	Jul 83
	4.3.17	DEFAULT FILE PROCESSING DOES NOT WORK	V3.1	Jul 83
	4.3.18	MULTIPLE LOCAL QUALIFIERS NOT ACCESSIBLE	V3.1	Sep 83
	4.3.19	LIB\$SPAWN FAILS WITH "TT" AS AN ARGUMENT	V3.2	Nov 83
	4.3.20	F\$FILE ATTRIBUTES FAILS	V3.2	Nov 83
	4.3.21	INCONSISTENT STATUS FROM SUBCOMMAND PROCEDURE	V3.2	Nov 83
	4.3.22	OPTIONAL PARAMETER TO CLI\$GET VALUE	V3.2	Nov 83
	4.3.23	INVALID SHOW COMMAND DOES NOT REPORT ERRORS	V3.2	Nov 83
	4.3.24	INACCURATE "PRCNAM" ERROR REPORT	V3.2	Nov 83
	4.3.25	NO PROMPT AFTER SET ON	V3.3	Mar 84
	4.3.26	OPEN/WRITE/APPEND ERROR	V3.3	Mar 84
	4.3.27	OUTPUT FILE NAME DERIVED FROM LOGICAL NAME	V3.4	May 84
	4.3.28	INCONSISTENT USE OF UIC FORMAT	V3.4	Jul 84
	4.3.29	F\$CVTIME RETURNS INCORRECT TIME VALUE	V3.4	Jul 84
	4.3.30	PROBLEM AFTER OPENING MANY FILES WITH OPEN	V3.4	Jul 84
	4.3.31	F\$SEARCH DOES NOT RETURN A NULL STRING	V3.4	Jul 84
LOGINOUT	4.4.1	LOGINS WITH NO SYSUAF FILE	V3.0	Nov 82
	4.4.2	THE /DISK QUALIFIER REQUIRES A COLON	V3.0	Mar 83
	4.4.3	REMOTE TERMINALS WHEN JOB LIMIT IS ZERO	V3.1	Sep 83
	4.4.4	ACCESS VIOLATION DURING SUBSEQUENT BATCH JOBSTEPS	V3.6	Jul 85
MCR	4.5.1	EXTRA DELIMITERS CAUSES AN MCR ACCESS VIOLATION	V3.0	May 83
	4.5.2	PROBLEMS WITH .DATA DIRECTIVE	V3.1	Jul 83
	4.5.3	FIRST CHARACTER MISSING FROM COMMAN, PO	V3.0	Sep 83
	4.5.4	.CLOSE USES CHANNEL NUMBER FROM .OPENA	V3.0	Sep 83
MESSAGE	4.6.1	MESSAGE RETURNS IMPROPER STATUS	V3.0	Jan 83
OPCOM	4.7.1	OPCOM LEAVES LOGFILE OPEN	V3.0	Jan 83
	4.7.2	EXTRA CHARACTER APPENDED TO OPERATOR REPLIES	V3.0	May 83
	4.7.3	OPERATOR LOGFILE PROBLEMS	V3.1	Sep 83
PRINT	4.9.1	SUBMIT /FORMS=0	V3.0	Nov 82
	4.9.2	SMINVOPT MESSAGE	V3.0	Mar 83
	4.9.3	START/QUEUE/TOP DOES NOT REINITIALIZE PAGE NUMBER	V3.3	Jan 84
	4.9.4	PRINT/FLAG_PAGE NOT DOCUMENTED CORRECTLY	V3.6	Nov 84
	4.9.5	FIRST LINE OF FORTRAN FILE IMPROPERLY FORMATTED	V3.5	Nov 84
CLEDITOR	4.10.1	COMMENTS IN CLD FILES	V3.1	Jul 83

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
DEBUGGER				
DEBUG	5.1.4	LINE NUMBER MISMATCH IN FORTRAN	V3.0	Mar 83
	5.1.5	DBG\$INPUT AND DBG\$OUTPUT INACCESSIBLE	V3.0	Mar 83
	5.1.6	DEBUG INCORRECTLY SIGNALS BADSCOPE	V3.0	May 83
	5.1.7	CTRL/Y, DEBUG DOES NOT RETURN TO PROMPT	V3.0	May 83
	5.1.8	INCORRECT ADDRESSES IN DST FOR SHAREABLE IMAGE	V3.0	May 83
	5.1.9	SET BREAK ISSUES "STATEMENT NOT FOUND"	V3.0	Jul 83
	5.1.10	PROBLEM WITH SET TYPE QUADWORD	V3.0	Jul 83
	5.1.11	EXAMINE/ASCII NOT CORRECT FOR FORTRAN	V3.2	Sep 83
	5.1.12	DEBUG DOES NOT PRINT BASIC STATEMENT NUMBERS > 99	V3.2	Sep 83
	5.1.13	ERRORS REFERENCING PL/I RECORDS	V3.2	Sep 83
	5.1.14	CALL COMMAND FAILS IN PL/I, PASCAL AND COBOL	V3.2	Sep 83
	5.1.15	SHOW CALLS COMMAND	V3.1	Sep 83
	5.1.16	FOREIGN DATA IN SET LANGUAGE CAUSES ERROR	V3.2	Sep 83
	5.1.17	ERRORS WITH WATCHPOINTS IN COBOL	V3.2	Sep 83
	5.1.18	DEPOSIT INTO HIGH LIMIT	V3.1	Sep 83
	5.1.19	VARYING STRINGS IN PASCAL	V3.1	Sep 83
	5.1.20	DEBUG EVALUATES COMPLEX VARIABLES INCORRECTLY	V3.2	Nov 83
	5.1.21	DEBUG MISHANDLES TYPOGRAPHICAL ERROR	V3.2	Nov 83
	5.1.22	ERROR IN EXAMINE COMMAND	V3.2	Nov 83
	5.1.23	EXAMINE ERROR WHILE DEBUGGING PASCAL	V3.2	Nov 83
	5.1.24	DEPOSIT FAILS TO STORE LARGE INTEGERS	V3.3	Jan 84
	5.1.25	EVALUATE GIVES INCORRECT ANSWER FOR G-FLOAT	V3.3	Jan 84
	5.1.26	EVALUATE REAL*8 PROBLEM IN FORTRAN	V3.3	Jan 84
	5.1.27	CANNOT SINGLE STEP PAST COBOL SORT STATEMENT	V3.2	Jan 84
	5.1.28	DEBUG GIVES ERROR WHEN DEPOSIT IN PL/I	V3.3	Jan 84
	5.1.29	DEBUG GIVES INCORRECT ANSWER TO DYNAMIC ARRAY	V3.2	Jan 84
	5.1.30	EXAMINE PASCAL ARRAYS VALUE INCORRECT	V3.4	Mar 84
	5.1.31	NO MESSAGE WAS GIVEN WHEN OPEN FAILED	V3.4	Mar 84
	5.1.32	LOGICAL PREDECESSOR OF FORTRAN CHARACTER ARRAY	V3.4	May 84
	5.1.33	LINE-STEPPING PROBLEMS WITH FORTRAN	V3.4	Jul 84
	5.1.34	TRACEBACK ERROR DEBUGGING PASCAL	V3.4	Jul 84
	5.1.35	EXAMINE RESULTS IN ERROR FOR PASCAL	V3.5	Sep 84
	5.1.36	PROBLEM WITH EXAMINE @PC IN MACRO	V3.5	Sep 84
	5.1.37	PROBLEM LOGGING OUTPUT	V3.2	Sep 84
TRACEBACK	5.3.1	INCORRECT STATUS FROM TRACEBACK	V3.0	May 83
	5.3.2	INCORRECT FORTRAN SOURCE LINE NUMBER SIGNALLED	V3.2	Nov 83
	5.3.3	TRACEBACK GIVES PSECT INSTEAD OF ROUTINE	V3.2	Jan 84
EDITORS				
EDTCAI	6.1.1	ERROR MESSAGE IN MODULE 4	V3.0	Mar 83
	6.1.2	TERMINAL REMAINS IN ALTERNATE KEYPAD	V3.0	May 83
	6.1.3	ERROR IN DISPLAY FOR VT52 TERMINAL	V3.0	May 83
	6.1.4	INSTRUCTION IS INCORRECTLY STATED	V3.0	May 83
	6.1.5	DOCUMENTATION	V3.0	May 83
SOS	6.2.1	WRONG FILE SPEC PRINTED	V3.0	Jul 83
FILE SYSTEMS AND RMS				
FILES-11 ACP	7.1.2	ODS-1 WILD CARD GROUP AND MEMBER NOT SUPPORTED	V3.0	Mar 83
	7.1.3	ACCESS DATE EXPLICITLY SET	V3.0	Mar 83
	7.1.4	DIRECTORY OF AN ODS-1 DISK HANGS PROCESS	V3.0	May 83
	7.1.5	ODS-1 AND BYTE COUNT QUOTA	V3.0	Jul 83
	7.1.6	RENAME AND SET FILE DO NOT UPDATE REVISION DATE	V3.2	Nov 83
	7.1.7	CIF FOR DANGLING DIRECTORY ENTRIES	V3.3	Sep 84
	7.1.8	EXBYTLM DUE TO INDEX FILE WINDOW TURN	V3.4	Nov 84
	7.1.9	SET FILE/TRUNCATE GIVES FILE HEADER CHECKSUM ERROR	V3.5	Jan 85
	7.1.10	HDRNOTMAP BUGCHECK	V3.4	Mar 85
	7.1.11	INDEX FILE ALLOCATION FAILURE	V3.5	Jul 85

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
INIT	7.2.1	/VERIFY HANDLED INCORRECTLY FOR FLOPPIES	V3.0	Mar 81
MAGTAPE ACP	7.3.1	VOLUME PROTECTION AFFECTS MOUNT	V3.0	May 81
	7.3.2	MULTIVOLUME FILES AND /OVERRIDE=SETID	V3.0	Jul 81
	7.3.3	TAPE DRIVE NOT DEALLOCATED ON LOGOUT	V3.0	Sep 81
	7.3.4	%RMS-F-ENV ERROR CAN OCCUR ACCESSING MAGTAPE FILES	V3.3	Mar 81
MOUNT	7.4.2	ACP WORKING SET TOO SMALL	V3.0	Mar 81
	7.4.3	OPERATOR ASSIST MAY FAIL ON VOLUME SETS	V3.0	Mar 81
	7.4.4	FILE STRUCTURE ERROR CONFUSES MOUNT	V3.0	May 81
	7.4.5	NULL PARAMETER VALUE ABORTS MOUNT	V3.0	May 81
	7.4.6	MOUNT DOES NOT PROPAGATE SEVERITY LEVEL	V3.0	Jul 81
	7.4.7	SHOW DOES NOT ALWAYS DISPLAY CORRECT DENSITY	V3.2	Jan 81
	7.4.8	MOUNT/FOREIGN CLEARS VOLUME VALID	V3.2	Jan 81
RMS	7.5.1	CONVERT CORRUPTS ISAM FILE	V3.0	Nov 81
	7.5.2	EDT FAILS WITH OVERDRAFT DISK QUOTA	V3.0	Jan 82
	7.5.3	WILD CARD ROOTED DIRECTORY ERROR	V3.0	Mar 82
	7.5.4	PADDING BLOCKS ON FOREIGN TAPE	V3.0	Mar 82
	7.5.5	INCORRECT \$XABKEY STORE MACRO	V3.0	Mar 82
	7.5.6	PROBLEMS WITH PROLOGUE 3 COMPRESSED KEYS	V3.0	Mar 82
	7.5.7	VAX-11 RMS SYSGEN PARAMETERS CAN HANG THE SYSTEM	V3.0	Mar 82
	7.5.8	CORRUPT FILE CONFUSES ANALYZE/RMS	V3.0	May 82
	7.5.9	WILDCARD \$PARSE CALL CAN CAUSE BUGCHECK	V3.0	May 82
	7.5.10	SET RMS/BLOCK=1 MAY CAUSE CORRUPTION	V3.0	May 82
	7.5.11	\$XXX STORE MACRO ERRORS USING AP, FP, SP	V3.0	May 82
	7.5.12	RMS BUGCHECKS ON \$CLOSE ON FOREIGN DEVICE	V3.0	May 82
	7.5.13	RMS CREATES FILE WITH INVALID KEY POSITION	V3.0	Jul 82
	7.5.14	WRITE CHECK INCONSISTENCY	V3.0	Jul 82
	7.5.15	NIL SHARING AND MULTISTREAMING BUGCHECKS	V3.0	Jul 82
	7.5.16	RMS-F-BUG AND ANALYZE ERRORS	V3.0	Jul 82
	7.5.17	LRL NOT SET IN FILE HEADER ON BATCH	V3.1	Jul 82
	7.5.18	F\$FILE ATTRIBUTES FAILED	V3.1	Jul 82
	7.5.19	SHARED FILE DATABASE GETS FULL ON DELPRC	V3.1	Jul 82
	7.5.20	PARSE IN EIGHTH SUBDIRECTORY DELETES PROCESS	V3.1	Sep 82
	7.5.21	DISK QUOTA ERROR DELETES PROCESS	V3.0	Sep 82
	7.5.22	POSITION TO EOF INCORRECT FOR RELATIVE FILES	V3.2	Nov 82
	7.5.23	RMS LOOPS WITH STREAM FORMAT COMMAND FILE	V3.2	Nov 82
	7.5.24	INCORRECT SIZE FOR BLOCK I/O AT EOF	V3.2	Nov 82
	7.5.25	HALT IN KERNEL MODE DUE TO AN INCORRECT RMS PATCH	V3.3	Jan 84
	7.5.26	RMS CAN RETURN STALE DATA ON UDA50	V3.3	Mar 84
	7.5.27	\$RENAME FAILS AFTER MANY FILES	V3.4	Mar 84
	7.5.28	\$CREATE FAILS IF ENQLM IS EXCEEDED	V3.4	May 84
	7.5.29	SS\$ _EXDISKQUOTA NOT RETURNED TO USER	V3.4	Jul 84
	7.5.30	WRITING UNBLOCKED RECORDS TO TAPE	V3.4	Jul 84
	7.5.31	FILE PROTECTION CORRUPTED OVER NETWORK	V3.5	Sep 84
	7.5.32	RMS BUGCHECKS IF RECORD LOCK FAILS	V3.5	Sep 84
	7.5.33	RECORD AND BUCKET SIZE TOO BIG	V3.5	Nov 84
	7.5.34	CORRUPTION AFTER ROOT BUCKET SPLIT	V3.6	Nov 84
	7.5.35	RMSBUG WITH EXEC MODE FILE ACCESS	V3.6	Jan 85
	7.5.36	REQUEST FOR LARGE DAP BUFFERS	V3.6	Jan 85
	7.5.37	PROBLEMS WITH RMS PROLOG 3 ISAM FILES	V3.7	Jan 85
	7.5.38	VERSION -O NOT HANDLED CORRECTLY	V3.7	May 85
	7.5.39	GENERIC KEY MATCH PROBLEM	V3.7	May 85
	7.5.40	LOSS OF FILE LIMIT QUOTA USING F\$SEARCH	V3.7	May 85
	7.5.41	SEARCH LOSES PLACE ON RMS\$_PRN ERRORS	V3.6	Jul 85
	7.5.42	INVALID %RMS-W-RTB ERROR ON STREAM FILE	V3.6	Jul 85
CONVERT	7.6.1	CONVERT CALLS ARE NOT RE-ENTRANT	V3.0	Mar 83
	7.6.2	CONVERT FAILS TO CHECK OUT OF ORDER KEYS	V3.0	May 83
	7.6.3	CONCURRENT CONVERTS IN SAME DIRECTORY MAY FAIL	V3.0	May 83
	7.6.4	CONVERT FAILS TO CHECK OUT OF ORDER KEYS	V3.0	May 83
	7.6.5	CONVERT TREATS SECONDARY NULLS AS DUPLICATES	V3.1	May 83

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
	7.6.6	ACCESS VIOLATIONS IN CALLABLE CONVERT ROUTINES	V3.0	Jul 83
	7.6.7	CONVERT FAILS WITH INTERNAL LOGIC ERROR	V3.0	Jul 83
	7.6.8	CONVERT CREATES BAD PACKED DECIMAL KEYS	V3.1	Sep 83
	7.6.9	CONVERT CREATES CORRUPT ISAM FILE	V3.1	Sep 83
	7.6.10	CONVERT FAILS ON REPEATED CALLS	V3.2	Nov 83
	7.6.11	CONVERT ERROR LEAVES INPUT FILE OPEN	V3.4	Mar 84
	7.6.12	CALLABLE CONVERT IS NOT REENTRANT	V3.3	Mar 84
	7.6.13	CONVERT DOES NOT IGNORE NULL KEYS	V3.3	Mar 84
	7.6.14	INCORRECT CHECKING FOR NULL SECONDARY KEY VALUES	V3.4	May 84
	7.6.15	CONVERT ERRORS WITH TRUNCATE ON CLOSE	V3.4	Jul 84
	7.6.16	CONVERT ERROR MESSAGES ARE CONFUSING	V3.5	Jul 84
	7.6.17	CANNOT CONVERT NETWORK INDEXED FILES CORRECTLY	V3.4	Jul 84
	7.6.18	PROBLEM WITH CALLABLE CONVERT ROUTINES	V3.4	Jul 84
	7.6.19	CONVERT WITH ALL NULL KEYS	V3.5	Nov 84
	7.6.20	CONVERT/RECLAIM YIELDS ACCESS VIOLATIONS	V3.6	May 85
FDL	7.7.1	FDL PROBLEMS WITH SPACE/TAB NULL VALUE	V3.0	Jan 83
	7.7.2	OVERLY LARGE ISAM FILE ALLOCATIONS	V3.0	May 83
	7.7.3	INTERMITTENT FAILURE OF FDL\$CREATE	V3.0	Jul 83
	7.7.4	INCONSISTENCIES IN OPTIMIZE SCRIPT	V3.2	Sep 83
	7.7.5	AREA POSITION FILE NAME BROKEN	V3.3	Jan 84
	7.7.6	PRINT ON CLOSE DOES NOT PROMPT	V3.2	Jan 84
	7.7.7	DUPLICATES PER SIDR HAS NO EFFECT	V3.2	Jan 84
	7.7.8	INTEGER OVERFLOW WITH NEGATIVE COMPRESSIONS	V3.2	Jan 84
	7.7.9	FDL PRODUCED INVALID RECORD SIZE	V3.2	Jan 84
	7.7.10	FDL CREATES INVALID PROLOG 2 FILES	V3.5	Mar 85
I/O DRIVERS				
ITDRIVER	8.2.1	/HARDCOPY/NOWRAP DOES NOT TRUNCATE	V3.0	Jan 83
	8.2.2	AUTOBAUD AND DFO3s	V3.0	Jan 83
	8.2.3	AUTOBAUD AND PARITY	V3.0	Jan 83
	8.2.4	DELETION OF HUNG UP PROCESS	V3.0	Jan 83
	8.2.5	FIRST CHARACTER IN TYPEAHEAD LOST	V3.0	Mar 83
	8.2.6	XOFF, THEN PHONE HANG UP, LEAVES ACTIVE PROCESS	V3.0	Mar 83
	8.2.7	SET TERM/PERM/NOALT DOES NOT WORK	V3.0	May 83
	8.2.8	CURSOR POSITION CLEARED AT BEGINNING SEQUENCE	V3.0	Jul 83
	8.2.9	SYS\$CANCEL PROBLEM WITH THE TERMINAL DRIVER	V3.5	Mar 85
	8.2.10	PROCESS HANGS IN LEF WAIT STATE	V3.5	Mar 85
	8.2.11	VERTICAL TABS EXPANDED TO LINE FEEDS	V3.6	Mar 85
TMDRIVER	8.4.1	DEFECTIVE MAGTAPE CAUSES ENDLESS LOOP	V3.0	May 83
	8.4.2	TMDRIVER RETURNS WRONG STATUS	V3.5	Sep 84
LPDRIVER	8.7.1	INCORRECT DEFAULT OF NOCR FOR PRINTERS	V3.0	Mar 83
XMDRIVER	8.8.1	XMDRIVER CANCEL ROUTINE STOPS DMC DEVICE	V3.0	Jan 83
TSDRIVER	8.9.1	TSDRIVER - SS\$ OPINCOMPL ON REVERSE TO BOT	V3.0	May 83
	8.9.2	BACKUP FAILS WITH /SS\$ ENDOFFILE	V3.6	Sep 84
	8.9.3	COPY CAN FAIL FOR ODD-LENGTH RECORDS ON TU80	V3.7	May 85
TFDRIVER	8.12.1	TU78 TAPES WRITTEN AT THE WRONG DENSITY	V3.0	Mar 83
	8.12.2	REBOOT REQUIRED TO CLEAR FATAL CONTROLLER ERROR	V3.0	May 83
	8.12.3	TIMEOUT ON REWIND OF A 3600 FOOT TAPE	V3.3	Mar 84 R
MBDRIVER	8.13.1	MBDRIVER DOES NOT TRANSMIT ZERO-LENGTH RECORDS	V3.0	Nov 82
RTTDRIVER	8.14.1	SYSTEM CRASH IN ABORT I/O	V3.0	May 83
YCDRIVER	8.15.1	BROADCAST TO DMF32 TERMINAL MAY HANG PROCESS	V3.0	May 83
	8.15.2	DMF32 PARITY SPECIFICATION IS REVERSED	V3.1	May 83
	8.15.3	DEVICE TIMEOUT ERRORS ON DMF-32	V3.2	Nov 83
	8.15.4	32ND CHARACTER IS PRINTED IN FIRST COLUMN	V3.2	Nov 83

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Y</u>
MTDRIVER	8.16.1	EOT TERMINATES SKIP RECORD BUT NOT SKIP FILE	V3.0	Sep 8
XGDRIVER	8.17.1	DMF32 SYNCHRONOUS PORTS DROPS DTR TOO EARLY	V3.2	Sep 8
XWDRIVER	8.18.1	PROBLEM IN XWDRIVER	V3.3	Jan 8
	8.18.2	POINT-TO-POINT BSC MODIFIER TO \$QIO	V3.7	Jul 8
XADriver	8.19.1	PROBLEM WITH LARGE TRANSFERS	V3.4	Jul 8
	8.19.2	IO\$M_RESET MODIFIER INHIBITS ERROR LOGGING	V3.0	May 8
DUDRIVER	8.20.1	MISSING UCB SETUP BY DUDRIVER	V3.6	Sep 8
	8.20.3	ERROR LOGGING CRASH	V3.5	Nov 8
	8.20.4	DSA DISKS DO NOT RECOVER FROM POWER FAIL	V3.7	Mar 8
	8.20.5	PROCESSES HANG WAITING FOR HSC50	V3.5	Mar 8
	8.20.6	LOGICAL DISK READ LIMITED TO 127 BLOCKS	V3.6	May 8
XEDRIVER	8.21.1	XEDRIVER SENDS BYTE COUNT WITH DATA	V3.6	Nov 8
	8.21.2	XEDRIVER CRASHES SYSTEM ON POWERFAIL	V3.7	May 8
PADRIVER	8.22.1	"RECEIVED CONNECT WITHOUT PATH-BLOCK" ERRORS	V3.4	Mar 8
	8.22.2	LARGE LRPSIZE CAUSES CI DRIVER CRASH	V3.5	Mar 8
	8.22.3	BOOT PROBLEM AFTER DATE AND TIME ARE LOST	V3.5	Mar 8
TSDRIVER	8.23.1	TU80 AND EOF PROBLEM	V3.5	Mar 8
DOCUMENTATION	9.0.1	RTL REFERENCE MANUAL EXAMPLE HAS ERROR	V3.0	Nov 8
	9.0.1	STRING ROUTINE DOCUMENTATION ERRORS	V3.1	Mar 8
	9.0.2	DOCUMENTATION ERROR FOR LIB\$SET_SYMBOL	V3.1	Mar 8
	9.0.3	ERROR IN CONDITION HANDLING EXAMPLE	V3.1	Mar 8
	9.0.4	UCB\$W_BCNT CAN BE WRITTEN AT FORK IPL	V3.4	Mar 8
GENERAL UTILITY PROCEDURES				
	9.1.1	LIB\$SCANC DOES NOT SAVE R4	V3.1	Mar 8
	9.1.2	PROBLEMS USING LIB\$SPAWN FROM BATCH JOBS	V3.1	Mar 8
	9.1.3	LIB\$SPAWN COMMAND LENGTH RESTRICTED	V3.1	Mar 8
	9.1.4	126 CHARACTER LIB\$DO COMMAND	V3.0	Mar 8
	9.1.5	OTS\$CVT TX L AND INVALID CHARACTERS	V3.1	Mar 8
	9.1.6	LIB\$SPAWN_AST ROUTINE	V3.1	Sep 8
	9.1.7	QUESTION ABOUT FLOATING POINT ACCURACY	V3.0	Nov 8
TERMINAL-INDEPENDENT SCREEN PROCEDURES				
	9.3.1	LIB\$PUT_BUFFER RETURNS SS\$_EXQUOTA	V3.1	Mar 8
BASIC LANGUAGE SUPPORT				
	9.21.1	CTRL/O HANDLED IMPROPERLY AFTER RCTRL/O	V3.1	Mar 8
	9.21.2	PROBLEMS OPENING INDEXED FILES	V3.1	Mar 8
FORTRAN LANGUAGE SUPPORT				
	9.28.1	DEFAULT UNFORMATTED RECORD SIZE TOO BIG	V3.1	Mar 8
	9.28.2	LIST-DIRECTED WIDTH CHANGES WITH RECL=	V3.1	Mar 8
PASCAL V2 LANGUAGE SUPPORT				
	9.30.1	RECORD_LENGTH > 65535 ACCEPTED	V3.1	Mar 8
	9.30.2	WRONG RECORD SIZE OF NON-DISK FILE USED	V3.1	Mar 8
	9.30.3	FIND OF VARYING DOES NOT STORE LENGTH	V3.1	Mar 8
	9.30.4	UPDATE USES WRONG SIZE	V3.1	Mar 8
	9.30.5	CONTINUE FROM I/O HANDLER GIVES ERROR	V3.1	Mar 8
	9.30.6	ERROR OPENING INPUT FROM COMMAND FILE	V3.1	Mar 8
	9.30.7	FAILURE OF FIRST OPEN CAUSES BUGCHECK	V3.2	May 8
UETP	10.1.1	BACKUP COPIES OF SYSUAF.DAT	V3.4	Jan 8
	10.1.2	SPURIOUS DEUNA ERRORS WHEN RUNNING UETP	V3.5	May 8
	10.1.3	WRONG TEST CHOSEN FOR DUP-11	V3.4	Jul 8

Sequence Number	Title of Article	Operating System	Mon/Yr	
11.20.24	ENDLESS RETRY LOOP	V3.4	Sep 84	
11.20.25	RENAME DOES NOT UPDATE REVISION DATE	V3.2	Sep 84	
11.22.1	DIFFERENCES UTILITY LOOPS WHEN /MERGED=0	V3.4	Jan 85	ay 85
11.22.2	DIFFERENCES UTILITY FLAGS MATCHING RECORDS	V3.6	Jan 85	il 85
11.25.1	SEARCH HELP LIBRARIES	V3.0	Nov 82	
11.25.2	HELP FOR SET TERM/DEVICE IS INCOMPLETE	V3.0	Mar 83	
11.25.3	ERROR IN HELP BACKUP	V3.0	Mar 83	
11.25.4	EQUIVALENT LOGICAL NAMES	V3.0	Mar 83	
11.25.5	ERROR IN HELP FOR F\$GETJPI	V3.0	May 83	
11.25.6	ERRORS WHEN INVOKED BY COMMAND PROCEDURE	V3.0	May 83	
11.25.7	HELP LOOPS ON WRITE ERROR	V3.3	Mar 84	
11.27.1	AUTHORIZE ACCESS VIOLATION	V3.0	Jan 83	
11.27.2	AUTHORIZE CONSUMES EXCESSIVE VIRTUAL MEMORY	V3.0	Jan 83	
11.27.3	ACCESS VIOLATION USING DEFAULT COMMAND	V3.0	Mar 83	
11.27.4	UAF COPY SHOULD RESET MAIL	V3.0	May 83	
11.27.5	BYTLM DISPLAY FIELD TOO SMALL	V3.0	May 83	
11.27.6	AUTHORIZE LIST COMMAND USAGE	V3.0	May 83	
11.27.7	AUTHORIZE IGNORES LONG COMMAND STRINGS	V3.2	Sep 83	
11.27.8	HELP FOR MODIFY/ACCOUNT MISSING	V3.3	Jan 84	
11.28.1	INVALID MINUTES TO SHUTDOWN	V3.0	May 83	✓ 83 v 85
11.30.1	PHONE AND BROADCAST MAILBOXES	V3.0	Jan 83	
11.30.2	LOGICAL NAMES FOR REMOTE NODES FAILS	V3.1	Sep 83	
11.31.1	SUBMIT/WSEXTENT=NONE	V3.0	Mar 83	
11.31.2	ACCESS VIOLATION SUBMIT/CHARACTERISTICS=255	V3.0	Mar 83	
11.32.1	CLI\$ ABSENT NOT RETURNED IN CERTAIN CASE	V3.0	Mar 83	
11.33.1	MONITOR DOES NOT ACCEPT F\$TIME	V3.0	Jul 83	
11.34.1	VMSUPDATE - CONSOLE VOLUME STATUS	V3.0	Jul 83	83
11.34.2	UPDATING ALTERNATE SYSTEM DISKS	V3.0	Jul 83	83
11.34.3	VMSKITBLD LACKS TUDRIVER.EXE	V3.4	May 84	0-
11.36.1	VMSINSTAL AND LOGICAL NAMES	V3.3	Jan 84	
11.36.2	INCORRECT JOURNAL FILE PROTECTION	V3.2	Jan 84	
11.36.3	SYSBOOT NOT CONTIGUOUS	V3.3	Mar 84	
11.36.4	UPDATE FAILS IF SYSUAF IS DEFINED	V3.4	May 84	
11.36.5	VMSINSTAL DOES NOT FIND ALL USERS	V3.5	Sep 84	
11.36.6	ERROR IF MULTIPLE PRODUCTS INSTALLED	V3.4	Nov 84	
11.36.7	INSTALL OF BLISS-16 FAILS IF LOGGING	V3.4	Nov 84	
11.36.8	VMSINSTAL IGNORES DEVICE ALLOCATED ERROR	V3.5	Jul 85	85 85
11.37.1	BACKLINK ERROR ON DISK WITH ANALYZE/DISK_ STRUCTURE	V3.3	May 84	
11.37.2	INFINITE LOOP READING BACKUP JOURNAL FILE	V3.6	Mar 85	
11.38.1	AUTOGEN IGNORES THE SWPFILCNT SYSGEN PARAMETER	V3.4	May 84	
11.38.2	INCORRECT GROWLIM VALUE	V3.1	Jan 85	
11.38.3	SHUTDOWN.COM AND VERSION NUMBER	V3.4	Jan 85	
11.39.1	ASYNCHRONOUS REWIND \$QIO ISSUED TO A DRIVE	V3.4	May 84	
11.39.2	DISK LEFT ALLOCATED TO NONEXISTENT PROCESS	V3.5	Sep 84	
11.42.1	CDU DOES NOT ALLOW DEFAULTS ON LISTS	V3.3	Jul 85	
ATION 12.1.1	DOCUMENT ORGANIZATION CREATES PROBLEMS	V3.0	Jan 83 R	
12.1.2	NO DEFAULT FOR DIRECTORY/OUTPUT	V3.0	Jan 83	
12.1.3	WRITE-BEHIND, READ-AHEAD DOCUMENTATION INCOMPLETE	V3.0	Mar 83	
12.1.4	ERROR IN COMMAND LANGUAGE USER'S GUIDE	V3.0	Mar 83	55
12.1.5	DOCUMENTATION ERROR FOR \$ERASE STATUS CODE	V3.0	May 83	83
12.1.6	BACKUP/NEW VERSION DOCUMENTATION UNCLEAR	V3.0	May 83	

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
	12.1.7	INADEQUATE DOCUMENTATION ON F\$PARSE	V3.4	Jul 84
		VAX-11 SORT/MERGE		
	13.1.1	CALLABLE TAG SORTS FAIL	V3.0	Mar 83
		VAX-11 DECOR		
USER-LEVEL BUGS AND PROBLEMS				
	14.1.1	RGB TO HLS CONVERSION	V3.0	Nov 83
	14.1.2	NEW FRAME WITHIN A BATCH OF UPDATES	V3.0	Nov 83
	14.1.3	DECOR CALLED FROM PASCAL PROGRAMS	V3.0	Nov 83
	14.1.4	MULTIPLE BATCHES AND DECOR\$NEW_FRAME	V3.0	Jan 84
	14.1.5	VT125 HANDLER SUPPORT FOR DECOR\$DEF COLOR_INDEX	V3.0	Jan 84
	14.1.6	VT125 HANDLER AND STROKE_PRECISION TEXT	V3.0	Jan 84
DECOR INSTALLATION				
	14.2.1	PROBLEM STATEMENT	V3.0	Nov 83
DOCUMENTATION/ HANDLER WRITING				
	14.3.1	ARGUMENTS FOR HANDLER GET_ AND SET_ LOOKUP ROUTINES	V3.0	Nov 83
	14.3.2	ARGUMENTS TO HANDLER INIT ROUTINE	V3.0	Nov 83
	14.3.3	DECOR\$K_DEV FULL SUPPORT HANDLERS	V3.0	Nov 83
	14.3.4	DEVICE TABLE MODULATION TYPE ENTRY	V3.0	Jan 84
	14.3.5	DOCUMENTATION FOR DECOR\$A_HIAT_ END_SEG	V3.0	Jan 84
	14.3.6	WRITEABLE PSECTS IN HANDLERS	V3.0	Jan 84
	14.3.7	HANDLER OUTPUT ESCAPE FUNCTIONS ARE CALLED INCORRECTLY	V3.0	Jan 84
		BASIC-PLUS-2		
	19.1.1	BASIC-PLUS-2 VERSION 2.2 TO SHIP IN MARCH	V3.4	May 84
		DECnet-VAX		
NCP	20.2.1	LINE LOOPBACK PROBLEMS	V3.0	Jul 83
	20.2.2	ERROR CIRCUIT NOT FORMATTED	V3.2	Nov 83
	20.2.3	LOGIC ERROR IN NCP	V3.4	Jul 84
	20.2.4	PROTOCOL KEYWORD SHOULD BE ETHERNET	V3.5	Nov 84
	20.2.5	PROBLEM WITH NCP EXECUTOR MAXIMUM BUFFER	V3.6	Mar 85
	20.2.6	REMOTE PROCESS NOT DELETED	V3.3	Jul 85
	20.2.7	PROBLEMS WITH DLM OVER PERMANENT VIRTUAL CIRCUITS	V3.7	Jul 85
	20.2.8	REMOTE LOGIN FACILITY PROBLEM	V3.6	Jul 85
NML	20.3.1	PERMANENT DATABASE NOT SHARED	V3.0	Mar 83
	20.3.2	SYSTEM HANGS DURING DOWN LINE LOADS	V3.2	Nov 83
	20.3.3	UNDOCUMENTED OPERATION FAILURE DETAIL	V3.5	Mar 85
EVL	20.4.1	TOO MANY SINK NODES GIVES OVERFLOW	V3.0	May 83
	20.4.2	DECnet EVENT 4.0 INCORRECTLY FORMATTED	V3.6	Jan 85
NETDRIVER	20.5.1	DECNET DOES NOT SUPPORT RESOURCE WAIT MODE	V3.0	May 83
	20.5.2	DECNET CRASHES WITH LARGE BUFFERS	V3.0	Jul 83
	20.5.3	DECNET CONNECT REJECT FAILURE	V3.4	Mar 84
	20.5.4	INCORRECT MESSAGES SENT TO PHASE III END NODES	V3.5	Jul 84
CNDRIVER	20.6.1	DECNET CI CIRCUIT INITIALIZATION FAILURE	V3.1	Jul 83
REMACP	20.7.1	ALLOCATED REMOTE TERMINALS	V3.0	Jul 83

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
NETACP	20.8.1	NODE ADDRESS OUT OF RANGE ERROR	V3.0	Sep 83
	20.8.2	BAD MEMORY BUGCHECK ON NETWORK SHUTDOWN	V3.2	Sep 83
	20.8.3	SYSTEM-F-NOLINKS MESSAGE IS MISLEADING	V3.2	Nov 83
	20.8.4	NCP ZERO KNOWN NODE COUNTERS FAIL	V3.4	May 84
	20.8.5	NETACP CRASHES WITH INVALID KERNEL STACK	V3.4	May 84
	20.8.6	NETACP BUGCHECKS ON SHUTDOWN	V3.4	May 84
SET HOST	20.9.1	COMMAND FILES CONTAINING SET HOST FAIL	V3.2	Sep 83
	20.9.2	RTPAD ACCESS VIOLATION	V3.1	Sep 83
LOGINOUT	20.10.1	DECNET DOES NOT ACCEPT NULL PASSWORDS	V3.2	Nov 83
RMS	20.11.1	HANG DURING NETWORK CREATE AND NO DISKQUOTA	V3.2	Nov 83
	20.11.2	DECnet RECORD SIZE LIMIT OF 512 BYTES	V3.2	Nov 83
	20.11.3	STREAM FILES NOT SUPPORTED BY DECnet-VAX	V3.5	Nov 84
	20.11.4	RSTS FILESPEC INCOMPATIBILITY	V3.4	Jul 85
	20.11.5	TOPS-10 FILESPEC INCOMPATIBILITY	V3.5	May 85
XMDRIVER	20.12.1	DMR-11 DOES NOT HANG UP PHONE LINE	V3.2	Nov 83
MOM	20.13.1	DOWN-LINE LOAD CORRUPTED HOST ID	V3.4	May 84
	20.13.2	MISSING DATE/TIME ON DOWN-LINE LOAD	V3.5	Mar 85
RTPAD	20.14.1	INCORRECT ERROR MESSAGE FROM SET HOST	V3.4	Jul 84
	20.14.2	RTPAD AND CTRL/O	V3.3	Jul 85
	20.14.3	RTPAD SINGLE STREAMS TERMINAL \$QIOS	V3.5	Jul 85
VAX-11 BASIC				
	21.1.1	ANNOUNCING VERSION 2.0 OF VAX-11 BASIC	V3.2	Mar 83
	21.1.2	DEBUGGING VAX-11 BASIC RECORDS	V3.2	Jul 83
	21.1.3	BASIC MEMORY REQUIREMENTS	V3.2	Jul 83
	21.1.4	VAX BASIC V2.2 NOW AVAILABLE	V3.2	Jan 84
VAX-11 DSM				
DOCUMENTATION	26.12.1	DOCUMENT ORGANIZATION CREATES PROBLEMS	V3.0	Nov 82
VAX-11 FORTRAN				
	28.1.1	INSTALLATION OF V3.1 UPDATE	V3.0	Mar 83
VAX-11 PASCAL				
	30.1.1	INCORRECT CODE FOR [EXTERNAL] VARIABLES	V3.1	Mar 83
	30.1.2	BAD CODE FOR CONSTANTS IN EXPRESSIONS	V3.1	Mar 83
	30.1.3	USE OF THE /CHECK QUALIFIER	V3.1	May 83
	30.1.4	TUNING THE VAX-11 PASCAL V2 COMPILER	V3.3	Jan 84
ADE				
GENERAL INFORMATION				
	35.1.1	ANNOUNCING DIGITAL'S ADE V2.0 FOR NON-PROGRAMMERS	V3.0	Jan 83
	35.1.2	MAINTENANCE UPDATE OF ADE V2.0	V3.0	Mar 83
	35.1.3	MAINTENANCE UPDATE OF ADE V2.1	V3.1	Nov 83
	35.1.4	MAINTENANCE UPDATE OF ADE VERSION 2.2	V3.5	Jan 85
	35.1.5	ANNOUNCING ADE V2.3 FOR MICROVMS	V1.0	Nov 84
PDP-11 DATATRIEVE/VAX V2.5				
	36.1.1	ELEMENTARY, LIST FIELDS NOT PROPERLY HANDLED	V3.0	Jan 83
	36.1.2	MODIFY OF DOMAIN WITH HIERARCHY MAY GIVE ERROR	V3.0	May 83
	36.1.3	PROBLEM REFERENCING KEY FIELDS WITHIN A VIEW	V3.0	May 83
	36.1.4	ENTERING CTRL/C IN GUIDE MODE	V3.0	May 83

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
		VAX/VMS V3.2		
		VAX-11 DATATRIEVE		
	38.1.1	ANNOUNCING VERISON 2.0 OF VAX-11 DATATRIEVE	V3.2	Sep 83
	38.1.2	ANNOUNCING VERISON 3.0 OF VAX DATATRIEVE	V3.6	Nov 84
	38.1.3	MULTIPLE FORMS FUNCTIONALITY NO LONGER SUPPORTED	V3.6	Nov 84
		VAX/VMS V3.x		
DOCUMENTATION	39.1.1	LIMITATIONS TO SHARING OF CDD RECORD DEFINITIONS	V3.0	Jul 83
		VAX-11 C		
	42.1.1	CREATING SUBPROCESSES IN VAX C	V3.2	Jan 84
		RTEM-11 V1.0		
GENERAL INFORMATION	44.1	INTRODUCING RTEM-11 V1.0	V3.0	Jan 83
		VAX-11 DECALC, V1.0		
	45.1.1	RESTRICTIONS/PROBLEMS IN VAX-11 DECALC VERSION 1.00	V3.0	Jul 83
		VAX-11 TDMS, V1.0		
	46.1.1	VAX-11 TDMS V1.0	V3.0	Jul 83
	46.1.2	LOADING REQUIRED TERMINAL SERVICE		Mar 84
		DECTYPE/VMS V3.0		
PRINTING	48.1.1	PROBLEM PRINTING WITH DECTYPE	V3.0	Jan 84
		ARTICLES OF GENERAL INTEREST		
	50.1.1	CONFUSION IN THE USE OF CONCEALED DEVICES	V3.0	Jan 83
	50.1.2	MESSAGE UTILITY	V3.0	Jan 83
	50.1.3	DN11 AND DR11-C UETP DEVICE TEST PROGRAMS	V3.0	Mar 83
	50.1.4	LINKER PROBLEM WITH SHAREABLE IMAGE EXPRESSIONS		Mar 83
	50.1.5	DEVICE INTERRUPT PRIORITY LEVELS		Mar 83
	50.1.6	DEFENDING AGAINST PASSWORD GRABBERS		Mar 83
	50.1.7	ERROR IN USER WRITTEN SYSTEM SERVICE TEMPLATE		May 83
	50.1.8	HELPFUL HINTS IN DIAGNOSING USER PROGRAMMING ERRORS RELATING TO DYNAMIC STRINGS AND MEMORY ALLOCATION		May 83
	50.1.9	DOCUMENTATION REQUIREMENTS FOR SPR PROBLEM REPORTS		May 83
	50.1.10	CORRECTION TO VERSION 3.5 VAX/VMS RELEASE NOTES		Jan 84
	50.1.11	PAGE SIZE, PRINT DEVICES, AND AUTOMATIC FORM FEEDS		Sep 84
	50.1.12	ADDITIONAL INFORMATION ON PAGE SIZE, PRINT DEVICES AND AUTOMATIC FORM FEEDS		Sep 84
	50.1.13	LOSS OF CARRIER ON REMOTE PRINTERS		Sep 84
	50.1.14	ERRANT FORMATTING BEHAVIOR IN VAX/VMS PRINT SYMBIONT		Jan 85
	50.1.15	SYSTEMS MAY CRASH DURING V4.0 INSTALLATION		Jan 85
	50.1.16	DELETION OF GLOBAL SECTIONS		May 85
OPCOM	77.1.1	OPC\$B_MS_TARGET FIELD SIZE INCORRECT	V2.5	Nov 84
DISK QUOTA	77.1.2	QUOTA.SYS REVISION DATE NOT UPDATED	V3.0	Nov 84

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
VERIFY	77.1.3	BACKLINK ALGORITHM	V3.0	Nov 84
TTDRIVER	77.1.4	QUESTIONS ABOUT BRDCSTMBX	V3.0	Nov 84
COPY	77.1.5	COPY CHANGES CBT ATTRIBUTES	V3.1	Nov 84
	77.1.6	COPY/OVERLAY WITH NULL INPUT DOES NOT WORK	V3.0	Nov 84
XMDRIVER	77.1.7	DMR-11 DOES NOT HANG UP PHONE LINE	V3.2	Nov 84
RMS	77.1.8	RENAME GIVES CONFUSING ERROR MESSAGE	V3.2	Nov 84
ACCOUNTING	78.1.1	CTRL/C DOES NOT RESTORE VT100	V3.0	Nov 84
DIRECTORY	78.1.2	INDICATION OF SPOOLED OUTPUT BY DIRECTORY	V3.0	Nov 84
OPCOM	78.1.3	USER NEEDS REPLY/ENABLE/PERMANENT	V3.0	Nov 84
PATCH	78.1.4	FWD REFERENCES SYMBOLS SHOULD USE B^, W^, OR L^	V3.0	Nov 84
RMS	78.1.5	CORRUPT FILE CONFUSES ANALYZE/RMS	V3.0	Nov 84
SHOW	78.1.6	SHOW PROCESS/CONTINUOUS UPDATE PROBLEMS	V3.0	Nov 84
MTDRIVER	78.1.7	EOT TERMINATE SKIP RECORD	V3.0	Nov 84
RMS	78.1.8	WRITE CHECK CONFUSION	V3.0	Nov 84
OPCOM	78.1.9	OPERATOR LOG FILE PROBLEMS	V3.1	Nov 84
BACKUP	78.1.10	SPURIOUS FIDERROR MESSAGE	V3.2	Nov 84
DIRECTORY	78.1.11	RELATIVE VERIOSN NUMBERS ON /EXCLUDE	V3.2	Nov 84
MOUNT	78.1.12	MOUNT MAGTAPE FAILS WITH EXCEEDED QUOTA	V3.4	Nov 84
MOUNT	78.1.13	USER WANTS SET LRP=N COMMAND	V3.4	Nov 84
AUTHORIZE	78.1.14	PROVIDE DIFFERENT HOURLY ACCESS FOR BATCH	V3.5	Nov 84
SYSGEN	79.1.1	RELOAD OF DRIVER WITH INCREASED UNIT	V2.5	Nov 84
SHOW	79.1.2	ENHANCEMENT SUGGESTION FOR SHOW	V3.0	Nov 84
RTL	79.1.3	TPARSE MACROS USE .LONG	V3.0	Nov 84
SET	79.1.4	SHOW ENHANCEMENTS	V3.0	Nov 84
DISK QUOTA	79.1.5	ERROR MESSAGE TOO SEVERE	V3.0	Nov 84
SYS	79.1.6	PROBLEM IN FORMAT	V3.0	Nov 84
TTDRIVER	79.1.7	SET TERM/PERM/NOALTYPEAHEAD DOES NOT WORK	V3.0	Nov 84
COPY	79.1.8	/NOTRUNCATE DOES NOT WORK	V3.1	Nov 84
MOUNT	79.1.9	ALLOW GREATER OPERATOR COVERAGE	V3.1	Nov 84
SET	79.1.10	SET MESSAGE DEFAULTS	V3.1	Nov 84
	79.1.11	SET DEVICE AND QUEUE NAMES	V3.1	Nov 84
BACKUP	79.1.12	/IGNORE=INTERLOCK VERSUS DEACCESS LOCK	V3.1	Nov 84
LIBRARIAN	79.1.13	BINARY KEYS BROKEN	V3.2	Nov 84
COPY SET	79.1.14	NON-SPANNED ATTRIBUTE LOST TO TAPE	V3.0	Nov 84
	79.1.15	SET ACCOUNT FAILURE	V3.2	Nov 84

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
BAD	79.1.16	BAD BLOCK FORMAT ON RP06	V3.3	Nov 84
TSDRIVER	79.1.17	DT07/TS11 IS NOT AVAILABLE AFTER SWITCH	V3.4	Nov 84

Date	Description	Particulars	Debit	Credit
1911	Jan 1	Balance		100.00
	Feb 1	By Cash	50.00	
	Mar 1	To Cash		25.00
	Apr 1	By Cash	75.00	
	May 1	To Cash		100.00
	Jun 1	By Cash	125.00	
	Jul 1	To Cash		150.00
	Aug 1	By Cash	175.00	
	Sep 1	To Cash		200.00
	Oct 1	By Cash	225.00	
	Nov 1	To Cash		250.00
	Dec 1	By Cash	275.00	
	Total		1000.00	1000.00

CUMULATIVE INDEX
(Version 4.n)

VAX/VMS SYSTEMS DISPATCH
CUMULATIVE INDEX FOR VAX/VMS V4.n
JULY 1985

Following is a listing of all articles for VAX/VMS V4.n and layered products.

The following components list was designed so that in future issues it could be expanded. Consequently, there are several numbers "reserved" for that purpose. Also, within each category the numbering scheme allows for expanding the primary category to include related subsets. For example, under 55.0, Utilities 55.35 is used for the COPY utility, 55.60 is used for the DIFFERENCES utility, etc. Periodically, the components list will be reviewed to insure that it accommodates the current software needs.

R = indicates a republished article

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
<u>VAX/VMS V4.n</u>				
SYS	5.20.1	F\$GETDVI INFORMATION INVALID IF DISK NOT MOUNTED	V4.0	Jul 85
	5.20.2	EXCESSIVE MODIFIED PAGE LIST WRITING	V4.0	Jul 85
	5.20.3	GETJPI PROC INDEX VALUE	V4.0	Jul 85
	5.20.4	SHUTDOWN WITH REBOOT CHECK CAN FAIL	V4.0	Jul 85
	5.20.5	TODR DEFINITION REMOVED IN VAX/VMS VERSION 4.0	V4.0	Jul 85
	5.20.6	SCREEN MANAGEMENT SYMBOLS DEFINED INCORRECTLY	V4.0	Jul 85
	5.20.7	TEMPORARY MAILBOX LOGICAL NAMES	V4.0	Jul 85
ACCOUNTING	10.5.1	PROBLEMS WITH ACCOUNTING SELECTION BY UIC	V4.0	Jul 85
	10.5.2	USER RECORD DISPLAYS SCROLL OFF SCREEN	V4.0	Jul 85
INSTALL	11.19.5	INABILITY TO INSTALL EXECUTABLE IMAGES	V4.0	Jul 85
SYSGEN	11.35.1	DISCREPANCY IN SCSNODE NAME LENGTH	V4.0	Jul 85
SYSINIT	11.40.1	QUOTA CACHING DISABLED ON THE SYSTEM DISK	V4.0	Jul 85
UPGRADE	12.10.1	CVTUAF DOES NOT COPY USER DATA AREA	V4.0	Jul 85
	12.10.2	VMSINSTAL FAILS DURING VERSION 4.0 UPGRADE ON TU81	V4.0	Jul 85
VMSINSTAL	12.15.1	VMIBCKERR.TMP INADVERTENTLY PLACED IN SAVE SET	V4.0	Jul 85
JOBCTL	15.15.1	SNDSMB WITH FILESIZ OPTION FAILS	V4.0	Jul 85
PRINT	15.25.1	SYMBIONT ISSUES BLANK PAGES WITH /SETUP	V4.0	Jul 85
	15.25.2	SUGGESTION FOR DEFAULT FORM FOR EACH QUEUE	V4.0	Jul 85
PRINT SYMBIONT	15.30.1	HOW TO PRINT HEADERS IN 80-COLUMN FORMAT	V4.0	Jul 85
	15.30.2	UNEXPECTED SYMBIONT PROCESS TERMINATION	V4.1	Jul 85
IVP	23.1.1	WARNING MESSAGE CAUSES IVP TO FAIL	V4.0	Jul 85
DECnet	25.5.1	NETWORK JOBS USE DEFAULT DCLTABLES	V4.0	Jul 85
	25.5.2	SPURIOUS NODE UNREACHABLE ERRORS	V4.0	Jul 85
	25.5.3	STARTNET.COM INCORRECTLY PARSES NODE ADDRESS	V4.0	Jul 85
	25.5.4	STARTNET.COM FAILS TO CHECK FOR ALTPRI PRIVILEGE	V4.0	Jul 85
XDDRIVER	32.25.1	DEVICE FULL ERROR WHEN INITIALIZING DMP-11	V4.0	Jul 85
YQDRIVER	32.45.1	YQDRIVER CORRUPTS NONPAGED POOL	V4.0	Jul 85

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Mon/Yr</u>
TTDRIVER	33.20.1	VT200 NOT DEFINED IN \$DCDEF	V4.0	Jul 85
	33.20.2	DMA NOT SET ON DMF-32 LINES	V4.0	Jul 85
LPDRIVER	34.20.1	SYSTEM-F-EXQUOTA ERROR ON PRINTOUT	V4.0	Jul 85
RMS	40.40.1	READ FROM SYS\$OUTPUT FAILS	V4.0	Jul 85
	40.40.2	COPY/OVERLAY FAILS IF DESTINATION WRITE-PROTECTED	V4.0	Jul 85
	40.40.3	CONFUSION ON \$CREATE USING SEARCHLISTS	V4.0	Jul 85
	40.40.4	\$RENAME RETURNS INCORRECT ERROR MESSAGE	V4.0	Jul 85
	40.40.5	ACCESS CONTROL STRING PARSED INCORRECTLY	V4.0	Jul 85
RTL	45.1.1	VAX BASIC PROGRAMS RETURN AN INCORRECT ERL FOR ERRORS 50 AND 52	V4.0	Jul 85
ANALYZE	55.5.1	ANALYZE/IMAGE REPORTS INCORRECT LINK DATE AND TIME	V4.0	Jul 85
AUTHORIZE	55.10.1	AUTHORIZE HAS TROUBLE PARSING /<ACCESS> QUALIFIERS	V4.0	Jul 85
	55.10.2	REVOKE/IDENTIFIER DOES NOT REMOVE UICS	V4.0	Jul 85
BACKUP	55.20.1	PROBLEM BOOTING STANDALONE BACKUP	V4.0	Jul 85
CONVERT	55.30.1	CONVERT/RECLAIM MAY ACCESS VIOLATE	V4.0	Jul 85
	55.30.2	CONVERT CAN INCORRECTLY REPORT DUP AND SEQ ERRORS	V4.0	Jul 85
DIRECTORY	55.65.1	DIRECTORY OUTPUT MISSING TOTAL LINE	V4.0	Jul 85
	55.65.2	DIRECTORY MAY DISPLAY NONEXISTENT FILES	V4.0	Jul 85
INITIALIZE	56.5.1	INITIALIZE/INDEX:BLOCK=N NOT RECOGNIZED	V4.0	Jul 85
INSTALL	56.10.1	INABILITY TO INSTALL EXECUTABLE IMAGES	V4.0	Jul 85
LIBRARIAN	56.15.1	PROBLEM DECOMPRESSING A LIBRARY	V4.0	Jul 85
LINKER	56.20.1	LINKER OPEN FILE LIMIT PROBLEM	V4.0	Jul 85
	56.20.2	LINKER REJECTS VALID FILE NAMES IN OPTIONS FILES	V4.0	Jul 85
SHOW	56.75.1	RANDOM BROADCAST CLASSES DISABLED	V4.0	Jul 85
SET PASSWORD	56.80.1	SET PASSWORD SIGNALS ERRORS TWICE	V4.0	Jul 85
STARLET	61.1.1	ERROR IN XAB\$ DEFINITIONS	V4.0	Jul 85
DOCUMENTATION	65.5.1	SYS\$TRNLNM EXAMPLE IS INCORRECT	V4.0	Jul 85
	65.5.2	SNDOPR SYMBOLIC CODE INCORRECT	V4.0	Jul 85
	65.5.3	UNDOCUMENTED ERROR MESSAGE FOR MOUNT	V4.0	Jul 85
SYS	70.1.1	TEMPORARY MAILBOX LOGICAL NAMES	V4.0	Jul 85
	70.1.2	SCREEN MANAGEMENT SYMBOLS DEFINED INCORRECTLY	V4.0	Jul 85
	70.1.3	TODR DEFINITION REMOVED IN VAX/VMS VERSION 4.0	V4.0	Jul 85
	70.1.4	SHUTDOWN WITH REBOOT_CHECK CAN FAIL	V4.0	Jul 85
ANALYZE	70.2.1	ANALYZE/IMAGE REPORTS INCORRECT LINK DATE AND TIME	V4.0	Jul 85
CONVERT	70.3.1	CONVERT CAN INCORRECTLY REPORT DUP AND SEQ ERRORS	V4.0	Jul 85
SYSGEN	70.4.1	DISCREPANCY IN SCSNODE NAME LENGTH	V4.0	Jul 85
RMS	70.5.1	ACCESS CONTROL STRING PARSED INCORRECTLY	V4.0	Jul 85
	70.5.2	\$RENAME RETURNS INCORRECT ERROR MESSAGE	V4.0	Jul 85
BACKUP	71.1.1	PROBLEM BOOTING STANDALONE BACKUP	V4.0	Jul 85
DOCUMENTATION	75.1.1	UNDOCUMENTED ERROR MESSAGE FOR MOUNT	V4.0	Jul 85

<u>Component/ Product</u>	<u>Sequence Number</u>	<u>Title of Article</u>	<u>Operating System</u>	<u>Month</u>
IVP	85.25.1	WARNING MESSAGE CAUSES IVP TO FAIL	V4.0	Jul
STARLET	85.50.1	ERROR IN XAB\$ DEFINITIONS	V4.0	Jul
<u>ARTICLES OF GENERAL INTEREST</u>				
OPCOM	95.5.1	BATCH/REMOTE ENABLE OF OPERATOR TERMINALS	V4.0	Jul
	95.5.2	ERRANT FORMATTING BEHAVIOR IN VAX/VMS PRINT SYMBIONT		Jul
SYS	95.5.3	DELETION OF GLOBAL SECTIONS	V4.0	Jul
MICROFICHE	95.5.4	INCORRECT ENTRIES IN VERSION 4.1 MICROFICHE	V4.1	Jul

Date	Description	Debit	Credit
1900	To Balance	100.00	
1901	By Balance		100.00
1902	To Balance	100.00	
1903	By Balance		100.00
1904	To Balance	100.00	
1905	By Balance		100.00
1906	To Balance	100.00	
1907	By Balance		100.00
1908	To Balance	100.00	
1909	By Balance		100.00
1910	To Balance	100.00	
1911	By Balance		100.00
1912	To Balance	100.00	
1913	By Balance		100.00
1914	To Balance	100.00	
1915	By Balance		100.00
1916	To Balance	100.00	
1917	By Balance		100.00
1918	To Balance	100.00	
1919	By Balance		100.00
1920	To Balance	100.00	
1921	By Balance		100.00
1922	To Balance	100.00	
1923	By Balance		100.00
1924	To Balance	100.00	
1925	By Balance		100.00
1926	To Balance	100.00	
1927	By Balance		100.00
1928	To Balance	100.00	
1929	By Balance		100.00
1930	To Balance	100.00	

COMPONENTS LIST



2



2



DISPATCH INDEX

5.0 Executive and System Services

5.5 IMAGE ACTIVATOR

5.10 LOGICAL NAMES

5.15 MEMORY MANAGEMENT

5.20 SYS

10.0 System Management, Operations & Security

10.0.0 System Management

10.5 ACCOUNTING

10.10 SDA

10.15 STARTUP

11.0.0 Operations

11.5 ERROR LOGGING

11.10 EVENT LOGGING

11.15 LOGINOUT

11.20 OPCCRASH

11.25 OPCOM

11.30 SYSBOOT

11.35 SYSGEN

11.40 SYSINIT

11.45 VMB

11.50 WRITEBOOT

12.0 Software Installation

12.5 INSTALL

12.10 UPGRADE

12.15 VMSINSTAL

13.0	Security
15.0	BATCH, PRINT, JOB CONTROLLER
15.5	BATCH
15.10	INPUT SYMBIONT
15.15	JOB CONTROLLER
15.20	LOCK MANAGER
15.25	PRINT
15.30	PRINT SYMBIONT
15.35	QUEUE MANAGER
20.0	DCL
25.0	DECnet
25.5	DECnet (generic)
25.10	DDCMP
25.15	DTS/DTR
25.20	EVL
25.25	FAL
25.30	HLD
25.35	MIRROR
25.40	MOM
25.45	NCP
25.50	NETACP
25.55	NML
25.60	REMACP
25.65	RTPAD (SET HOST)

30.0 Drivers

30.0 Console Drivers

31.0 Disk & Tape Drivers

31.5 DBDRIVER

31.10 DDDRIVER

31.15 DLDRIVER

31.20 DMDRIVER

31.25 DQDRIVER

31.30 DRDRIVER

31.35 DUDRIVER

31.40 DYDRIVER

31.45 MTDRIVER

31.50 TFDRIVER

31.55 TMDRIVER

31.60 TSDRIVER

31.65 TUDRIVER

32.0 NET Drivers

32.5 CNDRIVER

32.10 NDDRIVER

32.15 NETDRIVER

32.20 NODRIVER

32.25 XDDRIVER

32.30 XEDRIVER

32.35 XGDRIVER

32.40 XMDRIVER

32.45 XQDRIVER

32.50 XWDRIVER

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